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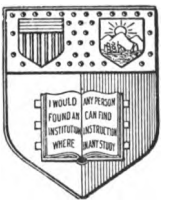

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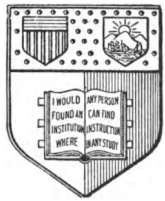

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THE

MIDLAND FLORIST

AND

Suburban Horticulturist:

A HANDBOOK FOR THE AMATEUR AND FLORIST.

CONDUCTED BY

ALFRED G. SUTTON, F.H.S.,

AUTHOR OF "FAVOURITE FLOWERS," ETC.

"Oh could we do with this world of ours,
As thou dost with thy garden bowers,
Reject the weeds and keep the flowers,
What a heaven on earth we'd make it."

MOORE.

1860.

LONDON:

SAMPSON LOW, SON, AND CO.,

LUDGATE HILL.

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TO OUR READERS.

MANY of our readers will be surprised to hear of our determination to relinquish the conductorship of the "Midland Florist." We have, however, after giving the matter every consideration, arrived at this resolution. Our reasons are two-fold: First, we are so much engaged that the only time we can devote to its preparation is that which should be apportioned to rest; the result is, that we have found our health to suffer, and prudence suggests that we should forego some portion of labour. Secondly, we do not feel in a position honestly to hold the office. Our shortness of time will not allow, as formerly, our visiting the nurseries and exhibitions for the purpose of comparing the new and old varieties, and the same reason prevents our attendance at the meetings where we have heard propounded the dogmas and *modus operandi* of the various cultivators. These reasons combined warrant us in the withdrawal from so arduous and critical an undertaking.

In glancing at our editorial career, we are happy to find that we have so far succeeded in maintaining a neutral and unwavering course. That our efforts have been recognized we cannot doubt, when we find among our contributors some of the first amateurs, and, if we reckon on the most moderate tables, we have not less than five thousand readers. That the volumes have an almost increasing value is also demonstrated by the fact, that the whole are out of print. These are all proofs the most flattering, and we hope we shall not be thought egotistical in being proud of their production.

To those advisers and friends who have so largely contributed to these results we cannot acknowledge sufficiently their services. To our readers we would express our thanks. To produce a book to please all would be hopeless; let us hope that something has been found to please each, and we are satisfied.

ALFRED G. SUTTON.

The "Midland Florist" was the first, and is now the best, of the cheap horticultural works. From number one to our last it has gradually increased in influence and circulation. The retirement of Mr. Wood, the original editor, did not disturb its gradual rise. When his successor, Mr. Dodwell, ceased to conduct it, there was immediately a more rapid advance; and under Mr. Sutton's management it has continued to move in the right direction.

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It will require all our energies to do justice to a work which has earned and maintained a character so good and so long; but we have the assurances of old contributors that they will not desert us. We have secured new ones, who will add literary strength, and we shall ourselves do the best we can to fill the office vacated by the late conductor.

Some persons fancy that the name of the conductor ought to be announced. While the work was new it was, perhaps, necessary; but nobody calls for the name of the editor of the *Times*, yet the authority of the *Times* is never disputed. The "Midland Florist" is an authority, and an editor is not likely to trifle with an established character. Besides, there is this advantage in withholding the name of an editor—he may be changed, and the public be no wiser. If he does not conduct the work as well as it ought to be conducted, he may be removed; but if the name were announced, every change would shake the confidence of the reader. One of the writers will naturally be editor; and from thirty well-known contributors it will be hard indeed if we cannot find one capable of upholding the character which the "Midland Florist" has earned by its independence, its impartiality, and its integrity.

Let us, therefore, hope that the readers will look about them for additional subscribers. If each were to resolve that he will bring another, the circulation will be doubled in a month, and the genial influence which the "Midland Florist" has shed on the science of gardening would be in like manner strengthened and extended.

It cannot be too plainly stated that any bookseller or newsman in the kingdom will guarantee its delivery, if ordered and prepaid, 3*d*. unstamped, 4*d*. stamped; but as, in addition to paying ready money for the book, there is another penny for a stamp, a newsman cannot, in justice to himself, send out a single copy without prepayment.

THE NEW PROPRIETOR.

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THE

MIDLAND FLORIST AND HORTICULTURIST.

THE CYCLOPOLIS IN BLOOM.

[We have little doubt that some of our subscribers, after reading the above heading, have asked themselves, "What is a Cyclopolis? We have never heard of it; and where can it be blowing?" To such we can only say, read the article, and you will soon learn the meaning of the title, as well as ascertain, in some measure, our reason for giving this preliminary essay, while making other improvements in our magazine this month.—Ed. "Midland Florist."]

The Cyclopolis is not a plant, and yet, to find its exact *habitat*, as much pains are necessary as in seeking the wildest. For instance, you have to take a globe, and having whirled all the land possible into the upper hemisphere, you must find the centre, where will be situated a city, which has not inaptly been termed Cosmopolis, or the emporium of the world, from its dealing in all things mortal and immortal—from souls of men to heels of boots; but which others, from its size, its single-eyed purpose—wealth at all hazards—and its anthropophagian habits, have lately named Cyclopolis.

This world-renowned Cyclopolis grows no corn, feeds no cattle, treads no grapes, yet has a population of two millions and a half, who go to sleep at night in peace, resting assured of bread and meat and wine on the morrow. No trifling population that, to sleep expectant of food by the dawn; yet surpassed at Pekin, exceeded of old in Rome, and most likely so in Babylon the Great—Babylon, the lair of the lion; Rome, the pestilential morass; Pekin, the seat of a government so stationary that, like still waters, it has fermented to awaken life.

Cyclopolis of the golden *trottoirs*, behold your fate! History

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has foreshadowed it, Walpole has predicted it, and Macaulay the grandiloquent has proclaimed it in the high places of thought—Macaulay who changes not, whenever it delights him to take a Penn in hand; Cyclopolis, the cynosure of an empire on which the sun never sets, but which, not three centuries ago, scarcely trebled thy population, even counting that outlying green island so terribly troublesome to keep, and yet so dangerous to lose; Cyclopolis the fetid, wallowing in a wealth of *cloacæ*, yet unable to keep herself wholesome, not merely because she will have an open sewer to pollute her atmosphere, but on account of her very soil being saturated with carburetted and sulphuretted hydrogen, and her atmosphere poisoned by carbonic acid and putrescent animal refuse.

The open sewer is to become a wholesome river by and by. We accept the declaration; but who shall remove the saturated soil, who cleanse the loaded atmosphere, who wash the sooty edifices? High-water service, with an unlimited supply and cleaning after the Dutch model, may do much; fountains playing in every street (not squirts dribbling into tin cups, and bottles spirting over leaky basins), and smoke converted into fuel, effect more; but, to complete the good work, the Cyclopolis must return to first principles. She must restore her trees and her flowers to Cheapside, entice once more her bees to Holborn, her butterflies to the Fleet, and welcome her robins with the winter. Not only the poetry of City life demands it, but its very existence; otherwise, ere the twentieth century shall arrive, the Cyclopolis, with her then five millions of toiling souls, will become even worse than now—a perennial pestilence, the hotbed of endemic fever, cholera, and consumption.

We have for some years been taught how to grow and to keep in health plants of a low type of structure truly, but extremely elegant in form, whether club-mosses, lady-ferns, maiden-hair, or towering brakes. We have recently discovered those laws of compensation which obtain in ponds and rivers, and have filled our drawing-rooms with miniature ponds, leaping alive with sticklebacks and newts, frogs and water-spiders, trout and minnows, gliding in and out, and shooting up and down and among mare's-tails, vallisneria, and water-lilies. We have made artificial seas, and planted them with bladder-wrack and scarlet tangle, mermaids' ribbons and bottle-weeds, enlivening them with sea-anemones and star-fish, spiny urchins, and boring pholas. We have done all this according to the law of compensation; and more, we have bred butterflies, sphinges, and moths for our greenhouses, our cabinets, and our sitting-rooms, yet cannot keep the City of cities sweet.

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What lack we but trees and flowers, and some protection to the more delicate, to make this Cyclopolis of ours again bloom as of old, ere sea-coal came into universal use, and furnaces grew noisome? Trees still live, and occasionally grow as fine as any in the most distant farms. But they should be planted more plentifully in every vacant spot, and down the centre of each wide street. As it is, in Wood Street grows a splendid Oriental plane; in Queen Street, the ash; where Allhallows the Less formerly stood, an elm; on Laurence Pountney Hill, the fig; while farther afield to the east, on Tower Hill, lindens and alders, thorns and acacias; to the west, in Gray's Inn and Lincoln's Inn, almonds, horse-chestnuts, limes, sycamores, and lilacs, all occasionally making efforts to bloom.

Yet flowers do not succeed so well, neither in-doors nor out; but two there are (the dahlia and the chrysanthemum) which seem to have not so great an aversion to their home, having, too, the great recommendation of being long bloomers and somewhat careless of town gases and town smoke; more especially the latter flower, which has occasioned this article to be written, and which in Lincoln's Inn Fields and at the Temple makes such a show of bloom that the very shrubs in November seem alive with light of every hue but blue. The Temple, indeed, has become quite a London exhibition within the last few years, with its incurved flowers, larger than asters and not unlike in bloom, towering to the height of sometimes seven feet, and from that dwindling down to pompones not a foot above the earth, yet beautiful as the ranunculus. It makes one almost wish to be a Templar, to come in at Michaelmas term and be thus greeted.

After this, we will mount St. Paul's, supposing the day be unusually clear, and look around over the waste of ground so covered with ugliness in every shape of chimney-pot and cowl, tile and slate, zinc and lead.

Let us ponder over this waste, and try to realize the "improved" properties we see—properties which would be really improved by having their chimneys closed, their roofs taken off, and covered with glass-houses for plants and flowers—roofs nearly as cheap, more useful, and much more ornamental, supposing they grew but a few bitter oranges, and protected the common calceolarias and cinerarias from soot. Then those south fronts of dingy brick, so terrible to the eye in summer, yet so well placed for grape-growing, fig-ripening, and cherry-blooming, not forgetting the golden-tasselled laburnum, so lovely in spring, and so likely, if protected from bleak winds, to reblow in the autumn. And all that these require are glass fronts and a daily bath. Nor would such glass fronts be so dear as the stucco walls, everlastingly wanting

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paint, and perpetually scaling, at the same time offering admirable arrangements for house-ventilation.*

Let us recall Nature in brighter colours. She never deserts us altogether, even in towns, though we so constantly drive her hence. Leave but a vacant spot untrodden, and how soon is it covered with moss, anon with grass—the poas—which travel all the world over, and enter even the City of the Plague unbidden, yet ever welcome. We can remember the time when the southern-wood and marigold, the mignonnette and scarlet-runner, the creeping-jenny and convolvulus adorned the working-man's window; when the song of the skylark enlivened his home, the poor bird standing upon his two inches of clover, singing merrily even in his prison-house of little ease. Yet then neither man nor lark lived in clover; but the one sought the fields for his bird's comforts, and, in administering to another's wants, found a "lode" of health. But property became "improved," grass grew farther a-field, and Angelo Taylor came with his act, seized the unoffending bird, and swept away the working-man's only foot of earth, bounded by wooden palings, and entered by a five-barred gate, over which hung a glass lamp, all *in petto*, yet to him an estate; and then beershops, trades' unions, and Chartist clubs followed, as they will, for man is a restless spirit at the best. We must "patch the Taylor afresh." Master *Sartor Resartus* must be looked after. He did very well for sign-boards and sheeps' plucks, gargoyles and barbers' poles, but he was no gardener; he rooted up trees, and threw down the poor man's foot of earth, despite the Scripture anathema, "Cursed be he who removeth his neighbour's landmark."

Then there was the much-abused Spitalfields weaver, solaced in his exile by mathematics and birds, flowers and butterflies, the pursuit of which became a passion long after he was acclimatized and naturalized. His were the finest tulips grown; his the best canaries bred; his the most beautiful of pigeons seen; his the most perfect aurelias captured. Now, nothing but the pigeons remain, and bets on them are settled in rotting publics, redolent of smoke, beer, and the exhalations of unwashed and uncared-for bodies. That favourite of his once, the "Life of Man," but a morning in bloom, is only a true emblem of his fate and his consumptive family's. Growing almost anywhere, like a beautiful child with the light of heaven in its face, it soon becomes dingy, and at length fades away in a Spitalfields atmosphere; its ultramarine petals, its golden stamens no longer welcoming the

* On this important subject, in connection with such structures, we may give a few useful hints next month, for the use of such of our town and city subscribers as take an interest in the subject.

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morning, and its earlier mediæval name (Our Lady's Eyes) almost entirely lost sight of.

And what is true of the silk suburb is true of the whole Cyclopolis—is true of all large cities; for, after allowing something for the idiosyncrasy of each, a large town is but a Cyclopolis to its smaller neighbour. The cheerful cry of primroses, or of sweet violets, is dying out in all; lavender is mostly sold in the shops, and chickweed and groundsel scarcely worth the gathering. True, ferns, lichens, and mosses are brought to market in small quantities. We have flower exhibitions and flower markets, after a fashion; crystal palaces, winter and botanic gardens, with more to come; but what we require are orchard-houses and graperies, wall-fruits and dwarf-flowers, and the "all a-growing, all a-blowing" of the last century turned into covered vans, supplying healthy flowering plants and shrubs. In a word, *London needs a Mudie from the nursery-ground.*

Then, and not till then, will the Cyclopolis grow healthy; then, and not till then, will cholera desist from its ravages; then, and not till then, will black-charactered volumes of smoke cease issuing from furnace chimneys, with early death to vegetable life, and slow poison to animal, written on their broad margins; then, and not till then, will poor men cease from drunkenness, and London children once more become healthy. God speed the time!

True, we have railways, and all down every line shoot up villas and country-houses; but these are not for the toilers. And when houses and streets shall stretch from Southgate to Richmond, and Gravesend be but a suburb, all the determination in the world to live beyond the worst of the smoke and the noxious gases will not avail, for even now the soot of London drops down at forty miles' distance, and at ten clogs the leaves of trees and stops *their* breath of life. They eliminate carbon, it is true, but they object to be drowned in it.

But there is hope. An example is set, and example includes the precept. One corner of the Cyclopolis annually blooms as the rose of the Holy Land—the rose of Sharon—and though, like a dying swan, the London year charms most at its death, there is no earthly reason why the Metropolis, filled as she is with every other sought and unsought blessing, should not be healthy again—should not bid defiance to the cholera—should not carry the law of compensation into her streets, and become the home of health, the city of fountains, and the paradise of flowers and of fruit.

JACOB FÖRST.

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STRAWBERRIES.

I AM much obliged by the descriptions of strawberries in the last two numbers of the "Midland Florist," which are, with rare exception, as far as I know them, very accurate, making due allowance for the difference between a French and English climate. I shall be able to report (if you will afford me space) next August on the following sorts, sent to me by Mr. Nicholson, with a desire that I will give a candid opinion of them: Leopold (Belgian), a white seedling, a tinted seedling, and white seedling, marked W., all three were raised by himself; the Scarlet Pine, Sir Harry (the true), Sir C. Napier, Ne-plus-ultra, Monstrous Hautbois (Rivers). Sent to me by M. F. Gloede: White Brittany Pine (*see* Delicieuse), Malakhoff, Ambrosia, Princess Sæpielea, Le Chalonaise (queer-leaved), Black Hautbois, Viridis (green-fleshed), Hovey's Seedling, Hooper's Seedling, Hendrie's Seedling (queer-leaved), Myatt's Pine-apple (queer-leaved), Rivers' Eliza, Carolina Superba, Red and White-flesh Alpine, La Reine, Fragraria Lucida (a Californian with polished leaves), Triomphe (dwarf-habited, and also polished in the leaf), Bicton White Pine, Excellente, Sir W. Scott, Patrick's Seedling, Le Becon, Salter's Fecunda, Fill-basket, Triomphe de Liege, Stirling Castle Pine, American Scarlet, Belle Bourdelouse, May Queen, Marquis de Laluer, Maubourg, Boule de St. Julian. M. F. Gloede has kindly promised me others. This morning I received a letter saying, "I shall send you a new white seedling raised by the head gardener at the imperial gardens of Versailles, a sketch of which I send you." Of all these strawberries, or at any rate of the worthiest of them, I shall be able to give a just and candid report. Three of these, spring-planted, were partially disfruited, and were tried as to a few berries each:—1st. Rivers' Eliza, which is a finely-constituted plant, very green and healthy in leaf, dwarf-habited, but vigorous, with fine fruit, solid, and of great flavour. I have little doubt, by presentiment, that this will stand some time on the catalogue. I have largely increased it, and have a hundred plants lying about in odd places to succeed effete plants in July; in a word, I am sure I shall be right. *Constitution* is the first thing I look for. 2nd, Bicton White Pine, called Barnes's Large White, amber white, softish, but large and good, of fine flavour, and valuable as a variation in colour. The runner plants have beaten the originals. 3rd. Belle Bourdelouse, almost exactly like the old Hautbois in leaf and flavour, but rather rich I thought. I received six plants in spring, disfruited them down to two or three

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berries per plant, ran ninety runners, and in September, when M. Gloede was here, the same were well fruited a second time; the weather, however, was too cold to ripen them. By disfruiting or disflowering, this sort might, with removals, be made to fruit in August in the open air, or at any time under glass.—Sent as a present from Mr. Turner, Oscar—a noble plant.

My original stock were: British Queen, as yet the best; Rival Queen, the aristocracy of strawberries; Trollope's Victoria, the best formed of all strawberries; Eleanor, the noblest of all strawberries; Eliza Vilmorin, rich and Queen-flavoured; Old Hautbois, the pine-apple of all strawberries; Goliath, excellent and a great cropper, both in and out of doors, the fruit-stalks are as thick as a goose-quill; Nimrod, Queen-flavoured; Keen's Seedling, and two others, one of which has not been named, but it will cause a stir some day or other, and the other is an old strawberry, great cropper, never failing, like, but not so scintillating as Alice Maud. These two nameless ones were burnt this spring by frost, until you could rub their young leaves into Scotch snuff, and after this they cropped inordinately. This was my lot till M. Gloede, Mr. Nicholson, and Mr. Turner had pity on me.

I have little doubt that (leaving out Oscar, which I have not tried) the British Queen, Rival Queen, Filbert Pine, Nimrod, Carolina Superba, Goliath, Keen, Sir Harry, Eleanor, and Elton Pine (the latter both late strawberries), are the cream of the English varieties. For quality of fruit I will take the first three and the last two against any other five. Carolina Superba cankers here. Filbert I only know by taste.

The bases of a *Fragrarium* are: Eleanor, late; Black Prince, early; Queen, or Rival Queen, whichever you can best grow; Trollope's Victoria, and Keen's Seedling, the best for in and out-door work, taken together. Lecoq will be a great strawberry when its good qualities under glass, or in the open air, are known. M. Gloede says in his letter, received to-day (December 12th), "Lecoq and Sir Harry stand the weather here better than any others." He says also, "The true Sir Harry" (*aside*, meaning that mine are not true) "is a great favourite, A 1, with the head gardener at Versailles." Mr. Nicholson has sent me the true Sir Harry, and I have planted his three by the side of three of mine, received from Tiley, which he received from Mr. Underhill. Up to this time, I confess, I cannot see in the plants a millionth particle of difference. Of course at fruiting I shall see. I never fight for victory, but for truth.

I will now conclude with a few remarks. To begin, Nimrod and Eleanor are two most distinct strawberries. I highly commend the dignified silence of Mr. Pince. Mr. May, Mr. Ingram

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and Mr. Baker, three distinguished Fragrarians, who have known both strawberries for years, repudiate the assertion with regard to the British Queen. Mr. Baker says she is more dependent on perpendicular roots, and less so on transortels than any other strawberry. He says she must be fed highly, and be kept in her crowns well above ground. Lastly, of the spring-planted novelties sent to me by M. Gloede, the following are the nicest class of plants up to this time (December 12th):—Rivers' Eliza, Sir W. Scott, Le Bason, Excellente, Fill-basket, Marquis de Laluer, Maubourg, Boule St. Julian, Hendrie's seedling, Triomphe, Bicton White Pine (forty-four runners from the six originals), and the American Scarlet. Eliza is least touched by this severe weather. Sir W. Scott is a sweet plant. Fecunda is evidently very hardy, with leaves like excellent Trollope's Victoria. I end with one word of advice—"Don't believe anything that you hear, and only half of what you see."

W. F. RADCLYFFE.

Rushton Rectory, Blandford, Dorset,
December 12th, 1859.

A FEW FACTS ABOUT ROSES.

AGREEABLY with your request, I have herewith forwarded you a few facts about Roses. I am glad that the queen of flowers is to have a prominent place in our magazine. I hope that we shall have, as before, some discussions on the merits of the various rivals—for there are rivals among our queens. The following notes I have made from the various reports:—The leading exhibitions of the past year have been the Great National Rose Show, the Regent's Park (two exhibitions), and the Crystal Palace (two exhibitions). In all these there were twenty-one first prizes, which, if we take as a basis, I think will enable us readily to form some estimate of each variety's worth. You ask me to report of those varieties which should be in every collection, and I think you will agree with me that those varieties which have stood the test of the principal exhibitions must be the best. The rose that has been shown most frequently is Devoniensis, about which there is now so much dispute as to whether or not it is of English parentage; and I find that it was in no less than eighteen of the winning pans out of twenty-one. Jules Margottin and Lord Raglan, both hybrid perpetuals, were exhibited

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sixteen times each; while Prince Leon, also hybrid perpetual, fifteen times. Two favourites are next found neck and neck—Gloire de Dijon, tea, and the much-abused General Jacqueminot. Both of these were exhibited in fourteen of the pans. Paul Ricaut, hybrid China, was to be found twelve times; while Baronne Prevost, Madame Vidot, and old William Griffiths, of the same class, together with Souvenir de la Malmaison, a Bourbon, came close together, being staged eleven times each. Solfaterre, a noisette, Caroline de Sansal, Madame Masson, Mrs. Rivers, and Triomphe de Paris, hybrid perpetuals, appeared ten times. Souvenir d'un Ami, tea scented, Coupe de Hébé, Charles Lawson, and William Jesse, hybrid China, nine times; and Auguste Mie, Colonel de Rougemont, La Reine, Madame Domage, Triomphe de l'Exposition, Pauline Lansezeur, all hybrid perpetuals, and Madame Willermoz, tea scented, were shown eight times each. I think we may, therefore, very well suppose that these may be considered the best roses for exhibitional purposes, though I must add to my list, Boule de Nanteuil (gallica), Comte de Nanteuil, Duchess of Sutherland (a very old favourite of mine, being pretty in all stages), Géant des Batailles, Louis Peyronny, Madame Laffay, Souvenir de Leveson Gower, all hybrid perpetuals.

The best roses for exhibition in pots, according to a similar test (although not confined to the exhibitions alone) are, Paul Perras, hybrid Bourbon; Chenêdolé, hybrid China; Paul Ricaut, hybrid Bourbon; Triomphe de Paris, hybrid perpetual; Souvenir d'un Ami, tea; Baronne Prevost, hybrid perpetual; Auguste Mie, hybrid perpetual; Blairi No. 2, hybrid China; Coupe de Hébé, hybrid China; Duchess of Sutherland, and Louise Odier, hybrid perpetuals: these will please everybody. In the February number I shall give you some account of the new varieties let out during the season.

And now, a word about the next Annual National Rose Show. I must say it is not so well supported as it should be, and when you come to examine the subscription-list, it does not look well to see so few of the votaries of our queen; the fact of the matter being this, that the amateur appears indifferent. Many of the fondest cultivators cannot afford their guinea, but, I am sure, would feel happy in contributing their half-crown or their shilling, by which means the funds would be greatly increased.

JACQUEMINOT.

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NOTES FROM MY TULIP-BOOK.

EVERY man to his fancy, Mr. Conductor, say I; and you well know that my fancy for a long time past has been tulips and chrysanthemums; for, to tell you the truth, I now neglect all other florists' flowers but these two. Both occupy the same ground. Tulips give place to chrysanthemums, and again chrysanthemums, in their turn, giving place to the tulips. I am, however, desirous that florists should compare their tulip-notes; and I therefore propose, in each number, to make extracts from my note-book, kept during the past four years. The whole of this—my first list—will consist of roses.

Aglaia.—This flower comes in both a flamed and feathered state; and yet such is the difference, that some maintain them to be two distinct varieties, on account of the former being more dwarfy. The cup is of average good qualities. The marking in feathered flowers is mostly good, although sometimes exception must be made to this rule. It always opens very creamy, but when well bleached, makes an excellent flower.

Anastasia.—I cannot but be surprised at the ignorance of people in stating this to be precisely the same as Vicar of Radford. The two flowers are not to be compared. Anastasia, however, is not to be despised—a good tall fourth-row flower.

Victor Emanuel.—This is one of Mr. Hunt's flowers. I have not grown it myself, but have seen it as exhibited by Mr. H. It is a fourth-row flower, feathered, pure, good cup, colour brighter than Triomphe Royale, although in marking it resembles it much, being broad at the base.

Juliet (Willison) is a second-row flower, of good cup, fine form, well marked with brilliant colours, feathered. Ought to be in every collection.

Mary Thorniley.—This I saw at my friend's, R. Headley, Esq., at Stapleford, near Cambridge, and am almost at a loss to describe it. The form is exquisite, the feathering bright and well developed; purity unquestionable. I believe it is a second-row flower, but am not quite certain. It is certainly one of the finest, if not the finest rose, we have in existence.

Bacchus.—When in a flamed state this flower is not good for much; in the feather, however, it is well worth having. It is, however, very changeable; first flamed, then feathered, and *vice versa.*

Abbott's Gem is a favourite with me, although there are some faults. The cup is short, and the petal tough. It is, however, yellow at the base.

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Battersby's Gem, on the contrary, is pure, of a good petal, and well formed. A great favourite of mine.

Lavinia comes with me rather dark. I like it, however, as it has many good qualities.

Rose Incomparable is another flower I saw at Mr. Headley's, and which also struck me. It is of excellent form, great purity, and stout petal; indeed, it rivals Mary Thorniley, and what may be said of the one is true of the other.

Rose Lac must not be forgotten, if it is old-fashioned. It is of remarkably good qualities; purity, form, and colour all good. Indeed, I should not think a bed complete without it.

Constance is another of Mr. Battersby's best flowers. The petals are good; it is pure, well marked, of a feathered character.

In following numbers of the "Midland Florist," I will give you a list of Bizarres and Byblœmens. In the meantime will not our old friend Hepworth, who, I think, has forgotten the "Midland Florist," the Rev. S. Cresswell, or Mr. Lymbery, give us a list? I am sure it would be received with thankfulness by us all.

A MIDLANDER.

December 28, 1859.

THE AURICULA.

SOME time since, in giving a descriptive list of auriculas, I promised to give some hints on the general cultivation. I cannot think of a better opportunity of so doing than in this, the first number of a new series; and I am sure, Mr. Conductor, I wish you every success. I shall at all times be most happy to afford the little instruction in my power. I shall therefore, in the course of a few short articles, give my experience of auriculas and of auricula-growing; and, having been an ardent cultivator of some thirty years' standing, I think that I have some little claim. The auricula is an alpine plant, frequently and for the most part found in the Alps of Switzerland. Many of your readers will say, "Why, then, is not the plant grown out of doors instead of in frames?" and I would reply, that it is not the cold which is so fatal to auriculas, but the excessive moisture so prevalent in our climate. On this account the auricula is mostly grown in frames. The best construction of these I will most likely treat of in the February number, and at the same time illustrate it with a drawing of my auricula-frame. Mr. Cunninghame, an old friend and valuable practical writer in the "Midland Florist," thus describes the method of crossing to procure seed:—"The plants which are to yield the pollen and those to bear the seed should be kept in

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the same temperature, and whenever the pips are half expanded, with a pair of very thin and sharp-pointed scissors cut out all the anthers of the corolla of the pip you intend to bear the seed, as well as the corolla itself, and that down as far as the top of the stigma, which be aware not to injure or touch with the scissors; also cut off all the pips of the pollen-bearing flower, except those you are to retain for the fertilizing dust, say two or three pips on each plant. This being done, then there is no fear of that tiny insect which is constantly flying about, and which lives exclusively on pollen, if it even touch the pip divested of its flower; but to guard against all chances, a small bell-glass or tumbler may be propped over the seed-bearer until the plant containing the pollen is ripe. If, on examination with your lens, you perceive the stigma of the seed-bearer to be in advance of the pollen, then you may cut the flower-stalk of the pollen-flower, take it into your room, and place it in a sunny south window, in a phial of lukewarm water, and in a few hours it will be ready for your crossing. If the weather be not sunny, it may be days ere the stigma is in a fit state for fertilization, and this state is indicated in the auricula and polyanthus by a viscous exudation on the summit of the stigma, and generally covering the entire surface of that organ; and in this condition it may remain many days, during which fertilization may be performed, and the period will be longer or shorter as the weather is sunny, damp, or overcast. The amateur, ever watchful, will, with his pocket-lens, observe the maturity of the pollen and the condition of the stigma; in the former to see if it has attained its powdery, and the latter its viscous condition. With his pincers he will then extract an anther, and by the gentlest touch distribute it very thinly on the summit of the stigma. This being performed, he will mark it by tying round the flower foot-stalk a small piece of coloured silk-thread, which he wishes to indicate the particular plant which bare the pollen, and at the same time ties a bit of the same round the stem of the latter, and at his leisure record it in his book. Now, I would not advise more than three pips on each plant, and, if properly done, you will have a well-filled pod, and the seed as large as any fine turnip-seed.

Sowing the Seed.—Having given directions as to the procuring of seed, I will now suppose that the seed is safely stored, and that you are desirous of raising plants. There is a great controversy always going on as to when auricula-seed should be sown; even within a very short time several papers have appeared to prove that July, August, and September are the best months, but I would advise that the seed be sown about the first week in February. The soil most suitable is fresh, light, sandy mould, clean two-year-old cow-dung, and a little sand. The seed-pans or boxes

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should be cleaned, and, having placed a sufficient amount of drainage, filled moderately full of the compost, which may be pressed rather closely down. On this sow the seed evenly, yet not too thickly, and sift over it soil to the depth of about a sixteenth part of an inch. Then remove the pans to the front part of the greenhouse, and over the pots place a piece of flat glass. If you have not the convenience of a greenhouse, the seed will strike freely in the window of your dwelling. If the seed is kept moderately moist, it will germinate at the end of six weeks. Some use a hotbed for the purpose of raising the plants, and most certainly I have seen excellent results. I always, in watering the seed, adopt the old method taught by our fathers, that of using a hard clothes'-brush, dipping it into lukewarm water, and, rubbing the hand sharply down, there is emitted a dense vapour, which waters without washing up the seed. This method may also be very advantageously adopted with cineraria, calceolaria, and other small seeds, and a brush of this sort will be found an invaluable companion. When the plants make their appearance, air should be gradually admitted to render them hardy; and when they have produced four or five leaves, they may be removed into pots, planting them about two inches apart, round the side of the pot, which will be found of great assistance to the roots. Here they may remain until they have grown considerably and the leaves begin to touch each other, when they must again be repotted, and after having attained a sufficient size, must be planted singly. Of course, they will not bloom the ensuing spring, but when they are two years old they will, in all probability, show bloom. All those of any merit should be marked, and, after the flowering season is over, should receive all the attention directed for full-grown plants. It does not always follow that because the plant is weak it is useless; indeed, the more delicate the plant, the greater care should be exercised. Weak plants often turn out the finer varieties. All inferior plants may be turned into the border.

Offsets.—This is another vexed question. The old Lancashire grower still adheres to the custom of not removing the offsets until August. I must say that here I differ with him; I always remove mine in spring, and find that this is the most favourable season, the young plants always progressing more favourably than when left till the autumn. They may be separated from the parent, either by being broken with the hand or else with a knife, made for the purpose, of either ivory or wood. To cut them off with a common knife is extremely prejudicial to the roots both of parent and offset. Plant them in small pots singly, or else round the edge of a larger one, in a compost of the

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same sort as that directed for seedlings; water carefully, and shade from intense sun; after potting-time they should be treated in the same method as herein-after directed for general stock.

SOIL.—The best soil, and one used with great success, is of rich loam of rotted turfs, leaf-mould, and cow-dung well rotted, about equal proportions; to this may be added a portion of clean nice sand, and a little peat. I don't mean to say that auriculas can only be grown in this compost, but, as a rule, a soil wholesome, porous, and simple will be found the best; should additional stimulus be required, a few bones well broken up will be found useful, while if a little quicklime be added, it will greatly promote their efficacy.

Hogg gives the following experience of Matthew Kenney, "perhaps one of the most successful and eminent growers of auriculas in his day, and won as many prizes as most men, during the course of ten or twelve years that he lived at Tolleridge, in Middlesex. He certainly had all the benefit of air, situation, and soil; which, coupled with his fondness for the flower, and his skilful treatment of it, to say nothing of his being almost constantly in the garden, gave him a decided superiority over many of his competitors, and insured, as it were, his chance of success. He always kept by him a quantity of sound staple loam, of rather a sandy nature, this he sweetened by frequent turning. His next principal ingredient was sheep-dung and hay-litter, well rotted by being turned, mixed, and fermented, in the same manner as the gardener does horse-dung and straw-litter. This he never made use of under twelve or eighteen months, when it had the appearance of a leaf or fine vegetable mould. Sometimes he put to it a small portion of cow-dung, but this very seldom; a little clean coarse sand was generally added. These formed his compost for growing them in; but he had another of a richer quality, if I may so term it, with which he used to top-dress his plants, and this he would do sometimes twice in a year. When they killed any sheep, he always reserved the blood and mixed it with the dung of poultry. These two ingredients he added to his loam and sheep-dung, and these constituted his compost for surface-dressing. In potting, every year, he trimmed and shortened the fibres and reduced the roots, with the mould adhering to them, to the bigness of a moderately-sized ball, but never shook the mould completely from the roots, if they were sound and going on well, until the third year. He then would wash the roots in water, examine them closely, shorten the top or main root, and cut away any decayed or unsound part; but if any plant appeared sickly at any time, he always served it in the same manner. He was particularly careful in making the

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holes at the bottom of the pots larger, and putting in three or four pieces of broken tile to drain the water off, and prevent it from becoming stagnant at the bottom of the pots; this, though apparently a trifling circumstance, ought always to be attended to."

This is Hogg's account of old Matthew Kenney; surely something may be learnt from the practice of a man who knew so well how to grow the auricula.

EXHIBITION FLOWERS.

No. I.—The Carnation and Picotee.

We intend monthly, under this head, to give the practical and detailed instructions for the cultivation and management of some one flower in particular. Most likely we should not have selected the carnation but for the urgent request of several of our old subscribers.

We shall not separate the two flowers, but simply regard the picotee as a third-class of carnations, derived from the French word *picoté*, signifying pencilled or spotted. The three classes, therefore, into which we divide them will be *bizarres*, *flakes*, and *picotees*. By some, or rather, I may say, by many, these designations will be perfectly understood, but, for the sake of the uninitiated, the terms may be thus explained:—

Bizarres (from the French word *bizarre*, signifying odd or strange) are those flowers having white grounds with a mixture of colours thereon in spots or stripes, and are again divided, according to the predominant colour, into crimson bizarres and scarlet bizarres.

Flakes are flowers having a ground of white with but one colour in stripes from the centre to the edge of the petal, and are divided into scarlet flakes, rose flakes, and purple flakes.

Picotees are those flowers having white or yellow grounds with markings running round the edge of the petal. They are generally exhibited in six classes—heavy and light edged purple, heavy and light edged red, and heavy and light edged crimson.

The carnation is stated by some persons to be indigenous to this country, and this is somewhat borne out by the fact that it may be found wild on the walls of Rochester Castle and other places. Still we think that the location of the whole of the species, which Linnæus designates as the *Dianthus Flos nobilis* (or superior-flowering dianthus), may be safely assigned to the southern part of Europe. Its propagation is generally secured either by seeds, by layers, or by cuttings termed pipings.

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SEED.—Perhaps a word or two may very advantageously be said with regard to the sowing of seed. It must be known that few plants are more shy than the carnation in the production of seed. Hogg, one of the best writers on the subject, says:—"It often happens that, out of two hundred blooming plants, you will not be able to get two pods of perfect seed. The reason may be accounted for in this way: first, because it is a flower that blows late in the summer, and has not time always to ripen its seed, especially in a wet one; secondly, because the carnations that are usually cultivated are so very double as to preclude in a great measure the expectancy of much seed. It is the semi-double flowers that yield the most. If you perceive the pericarpium, or seed-vessel, swell and grow hard, so as to give hopes of seed, which it will not do till the flower is fading and the leaves of it withering, then pluck the petals one by one out of the corolla, or cup, taking great care not to injure the styles or two horns, which, if you do, all chance of seed is lost. By letting the flower-leaves remain in the cup, they are apt to hold the dew and wet, which frequently occasions the whole to rot. As the seed-vessel fills up, you may with a pair of scissors cut off the ends of the cup all round, and make a slight incision down it to keep the wet from resting in it. It will ripen towards the end of September, but do not gather it till it is fully ripe, when it will be of a dark brown or black colour." The best mode of sowing the seed is in pans or wide pots; the former are preferable. Some persons say March, others April; but I think the latter, or even a later period, will be found the most advantageous. The soil most suitable is composed of parts (about equal) of well-decayed cow-manure and soil from an old loamy meadow. To this an addition of about one-sixth of good river-sand will be an improvement. Contrary to the new practice, I would advise that the seed be sown about half an inch deep; that *no bottom* heat be used, or, rather, that no heat at all be used. Were this plan more generally adopted, the complaints so frequently reaching us of the damping off, the going back, etc., would never be heard of; it is the heat in which all the mischief commences. Too much moisture must not be given, and shading from the intense heat of mid-day suns must be afforded. Keep them clean from weeds, and also from slugs and green-fly. The latter are easily destroyed by the dusting of strong snuff about July, or the first week in August. They may be planted (for they will by this time have six leaves) in rows about eight inches apart, in compost previously recommended, watering them carefully, until they have gained fresh hold of the soil. In September, at the time when the other stock is repotted, they must either be planted in beds, about ten inches

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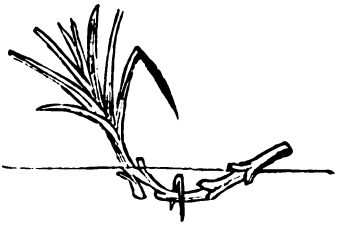
asunder, or else in pots as ordinary stock; but as full directions for the management of the plants, when they have attained this size, will be given in the "Work to be Done," I think it is unnecessary to prolong this subject by repeating them. When the number of seedling plants, however, is numerous, it is best, as well as least trouble, to let them remain in the bed, and as soon as the flowers show colour, all selfs, and indeed all that have not good character, should be at once thrown away. It does not, however, inevitably follow that the first flower being self the others will also prove the same; therefore all the flowers on the plant should be proved previous to its destruction.

LAYERING is the next point for consideration. The accompanying illustration will, I think, in a great measure, render the operation more easily understood. Strip off the leaves to the third or fourth joint from the top. Fresh soil should replace that of the surface, to about an inch and a half in depth. The layer being held firmly between the forefinger and thumb, the knife should be inserted through the third joint, drawing it downwards, and gradually bringing it out about half an inch below; the soil removed under the joint, and the layer gently lowered into the soil and retained in its proper position by a peg. Another method is to hold the layer or shoot with the fingers and thumb of the left hand; the knife is then introduced on that side next the ground, in a sloping direction *upwards*, beginning about a quarter of an inch below the joint, drawing it onwards till the centre of the joint is cut through. The tongue must then be cut off, as before directed, close to the joint, *not into it;* for, as the roots have to proceed from this point, great care must be taken. The layer must now be pressed firmly, yet with caution, into the soil, taking particular care not to break it off, and then pegged down. Too much earth in either mode must not be placed on the layer, and the more upright the layer itself is the better. In layering, water should be given the day before, and also should be administered through a fine rose-pot plentifully after, shading carefully. Hogg recommends any time between the 21st of July and the 21st of August, but the sooner the better. "Common gardeners," says he, "are great bunglers in layering. There is not one in ten whose assistance I would claim on the most pressing occasion, and leave the operation uncontrolled and unlooked after; whereas I could trust implicitly to an amateur cobbler, tailor, weaver, or



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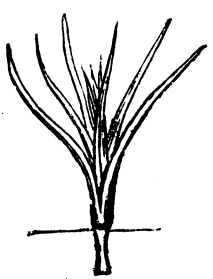
barber, who had the least practice with their own flowers." Fern pegs are generally recommended, although I have seen very good ones made from deal. Some persons use those made of lead, but these are very expensive. Earthenware have also been tried with very great success. In about three weeks the layers will have taken root, and at the termination of about eight weeks will be ready to cut off, with about half an inch of the parent stem attached. They may be planted, not too deep, in 40-sized pots; generally two or three plants may be planted in each. They may safely remain on a bed of ashes, or some other contrivance, to exclude worms, until such time as the other stock is wintered.

PIPING.—This is not a favourite mode, for it is very often attended with but poor success, although, in the long run, it is my experience that plants from cuttings will winter and succeed better than those from layers. In many cases it would be impossible to increase by layers, and here piping must be resorted to. All cultivators however, I think, will agree that the chances of success are greater if a hotbed of dung of about 80° be prepared, placing a compost of about equal portions of leaf-mould, rotten horse-dung, and maiden earth, with a portion of good sand on the surface to the depth of six inches; take a hand-glass, and, by pressing it in the soil, mark the shape in which to plant the piping, which Hogg prepared as follows:—



"The operation ought to commence about the first week in July, as when the shoots get too hard or woody, they do not strike root so readily as they do when taken sooner and in a more tender state. The piping should be cut with a sharp penknife at the second or third joint, according to the condition of the grass, but the shorter the better. The cut must take place horizontally, close below the joint, and the sheath or part that covers the joint must be carefully removed and peeled off. When the pipings are cut, the surface of the bed made flat and level, and gently watered with a fine rose, they may be stuck in three-quarters of an inch deep in rows not too near together; then let them be watered again, which will help to fix the earth close round them; the glasses on no account are to be shut down close till they are dry, or they will inevitably fog, rot, and perish. They require shading only when the sun is out. At the end of six weeks they will be sufficiently rooted to be transplanted into small pots or a prepared bed, over which it would be advisable to place a frame and lights for a week or ten days till they take root again." The cuttings may

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remain until the middle of September, when the other stock is wintered.

General Management.—During the months of January and February the plants must be kept as free from damp as possible, all decayed leaves must be picked off, and the surface of the soil stirred. Should the weather prove frosty, I generally cover the frame over with a mat, and if it prove too sunny I also shade. Water should be given moderately. Potting I commence in March, and I find that two-thirds loam from rotted turfs, and one-third of well-rotted dung, with a little sand, is the best compost. I also always prepare this at the latter end of the year, for I find that the frosts are extremely beneficial in rendering it friable and mellow. Plenty of drainage is indispensable, as are also clean pots; indeed, it is one of the worst faults of amateurs to persist in using pots time after time without even washing. The soil at the surface is generally sour from watering, and when potting, may be readily removed. If the weather prove unfavourable, leave repotting till the commencement of April, but do not drive it too late; give as much air as possible, and avoid damping the plants. April is also a good month to plant out in beds, which should be raised about six or eight inches above the general level. All will now go on right till May, when you must begin to tie up your shoots, and towards the end of June a good top-dressing of fresh compost will be found beneficial, as will also a liberal amount of water. In July the plants will be in their glory, and may, just previous to flowering, receive a supply of liquid manure once a week. In September the plants will again require repotting in the same soil as recommended in March. Green-fly is very often troublesome, but must be checked, otherwise it makes fearful ravages with the young growth; the supply of water, too, must be gradually decreased, the plants carefully kept free from dust and filth, otherwise their bloom will very likely prove a failure during the next season.

I find I cannot, in the limit of a single paper, treat of disbudding, of carding, or exhibiting, neither can I describe a frame, or discuss the various properties set down as standards for the guidance of exhibitors; I must therefore leave these topics for a second article. I have simply given the details practised with tolerable success, and should any grower kindly favour us with other modes of treatment, we shall feel greatly obliged.

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CULTURE OF RHUBARB.

As the rhubarb is a plant which produces seed very freely, almost the whole of which will germinate, it is impossible, with the largest space of ground, to have the whole of them planted out so as to put the qualities of the seedlings to the test. As the readiest way of ascertaining which of them are most likely to repay the trouble of cultivating, I have found it an excellent plan to sow in pots as soon as the seed is gathered. These being kept under cover, during the winter months, not so much as a protection to the plants as for the sake of preventing the pots from being injured by the frost, the young plants will be found to vegetate very early in the spring, showing from the first a difference of character, not only as to precocity, but in other respects also, as to growth and habit. Even at this time, therefore, some may be selected as the subject of experiment, and planted out; but the preferable plan, I think, is to allow the whole to remain in the seed-pots till the end of the season, when the difference of character is more decidedly marked. Those of the earliest and strongest habit will then have gained greatly on the others in point of size, and will otherwise show the qualities which should determine the selection as to which are most likely to reward the cultivator by turning out a new and valuable variety. The qualities in question I hold to be, chiefly, a stalk that is thick, succulent, and of a red colour, and a leaf that is round in shape, smooth on the surface, and of a fleshy texture.

In this way, the plants which make the best promise may be selected; but my remarks as to subsequent treatment apply equally, if not more, to the best of the varieties already in cultivation. The mode which I pursue is this:—Having chosen ground with a warm aspect, I have the soil dug out down to the subsoil, which, in the instance now referred to, is chalk at no great depth, say from eighteen inches to two feet. The space so dug out is about two feet in diameter. Of the earth dug out, I reject the lower and poorer portion, mixing the rest with leaf-mould, and with fresh soil of as good quality as I can procure. The soil thus improved I further enrich with guano, superphosphate of lime, soot, and bone-dust—all, or as many of them as I can at the time command, not forgetting some well-made stable manure. The whole of these being thoroughly incorporated with the soil, I place at the bottom of the hole, above the subsoil, a layer of bones of a considerable size, over which is put some of the mixture to the depth of six inches, then a few more bones with

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more earth, alternately, till the hole is not only filled up, but there is a hillock, say of a foot and a half above the level of the ground. In the centre of this I make an opening and fill up with leaf-mould, or any other good unmixed earth, for the reception of the plant, in order that the roots may not touch the richer soil until they are in a growing state, before which they might be injured by the strength of the manure.

The above observations are, of course, not expected to be of use to the professional cultivator, but may perhaps be of some service to the amateur, who may be desirous of ascertaining how new varieties may be obtained, or the established varieties may best be grown, without either going to any great expense or having much ground to spare. By treating them in the way described, and allowing them ample room, say six feet at least from plant to plant (but it were better to give them more), and by giving every season a top-dressing of a mixture the same as that recommended in planting, to be carried down by the winter rains, he will insure himself a supply of this most excellent and wholesome esculent, from the setting in of spring till nearly the end of autumn.

As a proof how well it has answered with myself, I have to state that soon after the Prince Albert rhubarb was introduced, now, I should imagine, at least twelve or fourteen years ago, I had three small plants of it, which I treated in the manner here recommended. Though put in at a distance of six feet from each other, they now appear like one large plant, the heads being joined together, and the crowns of the roots approaching very near. As a further proof that they have not otherwise degenerated in that length of time, I may mention that last year a leaf taken from one of them measured fourteen feet six inches in circumference.—Rev. C. Mackie, *in Proceedings of the Horticultural Society of London.*

NOTTINGHAM CHRYSANTHEMUM SOCIETY'S EXHIBITION.

As this Society's is decidedly the best provincial exhibition in the kingdom, we have no hesitation in giving a rather detailed report of the meeting which took place at the large hall, Mechanics' Institution, on November 15th and 16th. It was one of decided success, and we have been assured by competent judges, as far as regards specimen plants, no finer have been exhibited this season. The bloom was all that could be desired; form, size, and brilliancy, points

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of great importance in exhibitions of the chrysanthemum, were all duly developed. Some of the pompone plants were studded with upwards of a thousand blooms, and this especially applies to those shown on any number of stems by our old friend Mr. W. R. Lymbery, known principally among tulip-growers, but henceforth to be also a champion among the chrysanthemum-growers. We suppose that the reason why his plants were placed second was owing to the fact that the judges preferred the large-flowering kinds, which predominated in the first stage, that of Mr. Sanday. Another matter which went against Mr. L.'s flowers, we were told, was the fact of his training his specimens to wire trellises, although we must say that, in our opinion, the neat wire balloon on which the plants were trained is far preferable to the unsightly unpainted sticks in many instances used—not but that the former may be overdone. We do not wish this to be thought as said for the purpose of finding fault with the judges. The duties of a judge are very arduous, and the office is decidedly unenviable; it is, therefore, extremely injudicious even for critics to find fault with the conduct of censors, who were, in this case, gentlemen well known and respected; indeed, we are quite sure that judgment was given in every instance with the strictest impartiality. Nevertheless, Mr. L.'s plants were admirably done, and were duly appreciated by the visitors. If plants could be grown without support so much the better; but, until this is the case, we most certainly shall prefer the training to wire. Our old friend and instructor, Mr. S. Broome, was one of the censors; perhaps he will give us his opinion on the subject. We, however, would advise all exhibitors to grow their plants as short as possible, and to train them with as much ingenuity as they can devise. Mr. Eyre's plants were third, with twelve beautifully-grown and bloomed plants. All the classes were well contested. Among specimen plants we noticed a very fine one of Annie Salter, exhibited by Mr. Sanday, which deservedly took the first prize as specimens. Mr. Lymbery's Hermine and Mr. Eyre's Bob and St. Thaïs were also very good. The single specimen system, as adopted, worked well, and we would recommend in future that the two classes—large-flowering and pompones—be kept distinct. They would then be much more easily guaged. Among other classes, Bob and Cedo Nulli, exhibited by Mr. Eyre; Drin Drin, splendidly bloomed; Bob and St. Thaïs, by Mr. Lymbery; and Vesta, by Mr. Sanday, were excellent. In new things we noticed Golden Queen, Prince Albert, Julia Legrieve (large-flowering), and Mr. Astia, Salomon, Golden Cedo Nulli, and Mrs. Dix (a splendid thing); these will be found an addition to any collection. The best flower in the room was Amie Ferrière, exhibited by Mr. Lymbery, who

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received the prize awarded. The following were the decisions of the judges:—

CLASS A. *Twelve Dissimilar Plants.*—1, W. Sanday, Esq., for Christine, Miss Kate, Fleur de Marie, Bob, Cedo Nulli, President Decaisne, Hermine, Alfred Salter, Beauté du Nord, Madame Comerson, Vesta, Madame Rousselon. 2, W. R. Lymbery: Madame Rousselon, Bijou de Horticulture, Bob, Madame Albert, Argentina, Drin Drin, Modèle, St. Thaïs, Cedo Nulli, Urania, President Decaisne, Princess Mathilde. 3, S. Eyre: Bob, La Vogue, Henri, Thetis, La Escarbouche, St. Thaïs, La Gitria, Alexander Pele, Boule de Reine, Cedo Nulli, Golden Drop, Helène. 4, J. Soar: Brethill, Alexander Pele, Stellaris globosa, Duruflet, La Triomphe, Count Achille Viguer, St. Thaïs, Adonis, General Canrobert, Hermine, Bob, Surprise. 5, R. J. Beard: Golden Queen, Alfred Salter, Bob, Lucidum, Trophée, Madame Turridot, President Decaisne, Cedo Nulli, Hermine, Auguste Mie, Age d'Or, Madame Rousselon. 6, Mr. J. Clarke: Cedo Nulli, Bob, President Decaisne, Autumna, Mignonnette, La Trophée, Bijou, Helène, Adonis, Unknown, Mrs. Dix, Unknown.

CLASS B. *Six Pompones.*—1, W. R. Lymbery: St. Thaïs, General Canrobert, Salomon, Cedo Nulli, Madame Albert, and Bob. 2, Mr. Coulby: Cedo Nulli, Bob, Helène, General Canrobert, Duruflet, President Decaisne. 3, W. Sanders, Esq. 4, H. Warren, gardener to L. Heymann, Esq. 5, R. J. Beard. 6, T. Mason.

CLASS C. *Six Large-flowering.*—1, W. R. Lymbery: Auguste Mie, Golden Queen, Prince Albert, Hermine, Julia Legrieve, Gluck. 2, Mr. H. Willis: Golden Queen, Leon Leguay, Hermine, Stellaris globosa, Queen of England, Poudre d'Or.

CLASS D. *Three Plants, Pompones.*—1, W. R. Lymbery: Cedo Nulli, Dr. Bois Duval, Thetis. 2, H. Willis: Bob, Cedo Nulli, Mignonnette. 3, G. Pickerill: Surprise, Cedo Nulli, Mignonnette. 4, G. Burnham: Cedo Nulli, Helène, Count Achille Viguer. 5, T. Smith: Helène, Cedo Nulli, Count Achille Viguer. 6, J. Porter: President Decaisne, Bob, Bijou.

CLASS E. *Three Large-flowering.*—1, J. Porter: Rolla, Chevalier Domage, Progne. 2, R. J. Beard: Golden Queen of England, Leon Leguay, Auguste Mie.

Specimen Plants.—1, Annie Salter, W. Sanday. 2, St. Thaïs, S. Eyre. 3, Bob, ditto. 4, Madame Alibert, W. R. Lymbery. 5, Hermine, ditto. 6, Bob, J. Bamford. 7, Helène, S. Eyre. 8, Madame Turridot, R. J. Beard. 9, Trophée, J. Smith. 10, Hermine, J. Bamford. 11, La Triomphe, J. Ward. 12, President Decaisne, R. J. Beard. 13, Urani, W. R. Lymbery. 14, Trophée, J. Bamford.

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Specimen Plants, Mrs. Dix.—1, W. Coulby. 2, W. Sanday. 3, W. R. Lymbery.

Cut Flowers.—Twelve blooms: 1, W. Sanday. 2, J. Porter. 3, W. R. Lymbery. 4, S. Eyre. Six blooms: 1, Not known. 2, W. R. Lymbery. 3, H. Willis. 4, J. Porter. Twelve pompones: 1, S. Eyre. 2, W. R. Lymbery. Six pompones: 1, W. Sanday. 2, W. R. Lymbery. 3, J. Porter. 4, W. Coulby. 5, Not known. 6, T. Mason. Golden Queen: 1, W. Sanday, Esq. 2, H. Willis. 3, W. Coulby.

The judges were the Rev. S. Cresswell, Radford Vicarage; Mr. S. Broome, F.H.S., Temple Gardens, London; and Mr. Lamb, Nottingham.

NEW FLOWERS OF THE YEAR.

Auriculas.—Exhibitor (Turner), a gray-edged variety of more than average properties; certificate, Royal Botanic Society, March 23rd. Imperator (Turner), a green-edged variety of first-rate properties; certificate, Royal Botanic Society, April 6th.

Cinerarias.—Acme of Perfection* (F. and A. Smith), a prettily-formed white, tipped with purple, and of good quality. Beauty (Turner), dwarf; florets tipped with rose crimson; the disk gray. Brilliant* (Turner), free blooming and of medium size; remarkable for the rich dark purple crimson of its flower-heads. Conspicua (F. and A. Smith), large; crimson with white ring around the disk; a fine showy market flower. Duchess of Sutherland* (Turner), large and bold; the florets white in the lower half, rosy purple above. Goliath (F. and A. Smith), large, white, tipped with rosy crimson; a fine market flower, and very attractive. Highland Mary* (Bousie), bold florets; fine white, purple disk. Hilas* (Holland), average properties; white, tipped with rosy purple; remarkable for the dark purple, almost black, permanent disk. Incomparable* (Turner), a rich-looking variety; florets rose crimson, having a ring of white surrounding the dark rosy disk, and forming a full flat circle. Lady Seymour (Turner), deep blue, white ring, dark disk; very fine. Lord Clyde* (F. and A. Smith), dwarf and free blooming, with neatly-cupped, bold florets; deep purple crimson. Queen Victoria* (Turner), large, and of good properties; rosy crimson, with a white ring around the purplish disk. Slough Rival* (Turner), habit good; florets white at the base, purple-shaded crimson above; the disk dark. [Those marked * received certificates at the Royal Botanic Society.]

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Carnations.—Sir H. Havelock (Puxley), a scarlet-flake variety of first-rate properties; awarded a first-class certificate of merit, by the Floral Committee of the Horticultural Society, to Mr. Turner, of Slough. Illuminator (Puxley), scarlet flake; a bright and fine flower. Lucia (Taylor), rose flake; a well-marked flower, and of good size. Marshal St. Arnaud (Puxley), scarlet flake; a fine large flower, of good substance, and very bright. Nymph (Puxley), rose flake; large, bright flower; very fine.

Picotees.—John Linton (Headley), a heavy purple edge; fine quality, and very constant. Rival Purple* (Headley), a heavy purple-edged variety; fine white ground; a good and useful flower. Rev. A. Mathews* (Kirtland), a heavy rose-edged variety; a good and useful flower. [Those marked * were commended by the Floral Committee of the Horticultural Society.]

Fuchsias.—Alaric (Smith), sepals of a dull crimson colour, very broad, short, and expanding; corolla large, deep purple; a distinct and showy variety, with a dwarf and free-flowering habit. Butterfly (Smith), tube short and stout; sepals of a bright crimson colour, tipped with white, broad, and well reflexed; corolla pure white; a very pretty variety. Distinction (Ivery), tube and sepals bright coral red, the sepals broad and expanding, and the tube remarkably short; corolla purple, large, and widely expanding. Elegantissima (Smith), tube and sepals rich scarlet crimson, the sepals broad and reflexed; corolla violet purple, very large, and expanding. Marquis of Bath (Wheeler), tube and sepals of a deep coral red colour, and of great substance; corolla full, double, compact, and of a deep purple colour; this is the best double fuchsia which has yet been raised. Senator (Smith), tube and sepals bright waxy crimson; sepals broad and well reflexed; corolla of a rich violet colour, large, and well expanded; this received a *first-class certificate* at the Royal Botanic Society's Exhibition. Solferino (Smith), tube and sepals bright crimson, the former short, and the latter well reflexed; corolla deep purple, and very large; this variety is in the style of Souvenir de Chiswick, and was *commended* for its dwarf, free-flowering habit, combined with its good properties, at the meeting of the Floricultural Committee of the Horticultural Society.

Pansies.—The following have been carefully selected for their superiorty over existing varieties:—Alexander M'Nab (Downie and Laird), dark self, beautifully shaded in the centre with light blue; extra fine. Black Doctor (Whittingham), a fine dark self. Cherub (Hooper), yellow self, closely resembling Yellow Beauty. C. W. Ramsay (M'Farlane), yellow ground, belted with bronzy purple; a distinct and fine variety. Defiance (Auckland), a pure purple self, extra in substance, quality, and smoothness; the

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lower petal rather too small. Duchess of Hamilton (Downie and Laird), white ground, belted with light purple, large dense blotch; smooth and fine form. Mary (Douglas), white ground, heavily belted with light maroon; fine. Mary Jane (Middlemas), white ground, with medium purple belting; blotch dense and solid; form and substance fine. Miss Bate (Sadler), white ground, purple belting; bold, dense eye; fine. Miss Carnegie (Downie and Laird), white ground, with nearly black belting, first-rate. Mr. Bate (Sadler), deep yellow, the upper petals and belt bronzy purple; fine. Mrs. M'Laren (Downie and Laird), deep bronzy maroon, very smooth and fine; early.

Pinks.—Charles Turner (Maclean), dark purple; very full flower, and very fine. Edith (Maclean), reddish purple; average size flower. Eleanor (Turner), rose; large full flower, good and very fine. Empress (Maclean), a fine red, of good qualities. Little Gem (Maclean), red; full flower, good form, and fine. Millie (Maclean), a very fine, dark flower, of good quality. Minnie (Turner), red; a very large, full flower. Miss Glover (Turner), fine purple; large, and good form.—*From the Gardener's Year Book.*

TULIP GOSSIP.

DURING the tulipomania in Holland, in the middle of the seventeenth century, a single root of the Viceroy was exchanged, in the true Dutch taste, for the following articles:—Two lasts of wheat, four lasts of rye, four fat oxen, three fat swine, twelve fat sheep, two hogsheads of wine, four tuns of beer, two tons of butter, one thousand pounds' weight of cheese, a complete bed, a suit of clothes, and a silver beaker, the whole being worth 2500 florins. These tulips were afterwards sold according to the weight of the roots. Four hundred perits, or something less than a grain, of the bulb called Siefken, cost 4400 florins. 446 perits of Admiral Von der Eryks, 1620 florins; 106 perits of Schilders for 1615 florins; 200 perits of Semper Augustus, 5500 florins; 410 perits of the Viceroy, 3000 florins, etc. A bulb of the species Semper Augustus has been frequently sold for 2000 florins, and it once happened that there were only two bulbs in existence, the one at Amsterdam, the other at Haarlem. One of these sold for 4600 florins, together with a new carriage, two gray horses, and complete set of harness. On another occasion a bulb was sold for twelve acres of land. So great, indeed, was the rage for favourite bulbs, that they who had not ready money exchanged them for their goods, houses and land, cattle and clothes. The trade was followed not only by mercantile people,

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but also by the first noblemen, citizens of every description, mechanics, seamen, farmers, turf-diggers, chimney-sweeps, footmen, maid-servants, old clothes dealers, etc. At the commencement of the rage everybody won, no one lost. Some of the poorest people gained in a few months house, coaches, and horses, and figured away like the first characters in the land. In every town some tavern was selected which served as a change where high and low traded in flowers, and confirmed their bargains with the most sumptuous entertainments.

BEST PINKS.

SEEING a list of some of the finest and newest pinks in your October number, furnished by Mr. R. Oswald, of Birmingham, I beg to subjoin the names of twelve varieties I have grown very successfully in this neighbourhood, and as they are such as can be fully relied upon for exhibition purposes, likewise obtainable by the working-classes, the majority being old sorts, and consequently reasonable in price, it struck me that the selection might be appreciated by some amateur or new beginner, *i. e.*, providing you would kindly insert them in a number of your valuable work:—

New Criterion (M'Lean), John Bull (M'Lean), Kohinoor (Bragg), Mrs. Judd (Turner), James Hogg (Bragg), Mrs. Norman (Norman), Colchester Cardinal (Norman), Lord Wellesley (Bragg), Huntsman (Jones), Miss Eaton (M'Lean), Royal Visit (Beswick), Jessy (Jeans).

I propose introducing, next season, six seedlings of this beautiful but neglected tribe, when I shall expect some of the very first class to make way for them.

Frog Hall Lane, Warrington. J. THURSTAN.

NOTES AND QUERIES.

[We shall feel obliged by any Correspondent or Subscriber forwarding answers to any of the following queries.]

WILL you, or some of your numerous correspondents, be good enough to give me the names of the best yellow rose for a south-east wall?—JACQUEMINOT.

What are the names of the best dark crimson show roses? I want them of good substance, and as dark as possible.—BOURBON.

Have you had any experience with pampas grass? I cannot get my specimen to succeed, although I have planted it in several

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situations. Perhaps some correspondent more fortunate than myself will give me a few hints?—W. R.

An Amateur may safely rely on his recent purchase of Jones's Cannon Boiler. We know of several in use at the present time with great success.

National Tulip Exhibition.—This exhibition is to be held at Cambridge, not at Nottingham, as our correspondent (A Tulip-grower) supposes. We have not received any intimation of its operations, but suppose some announcement will be made this month.

A Rose-beginner should make a hole about eighteen inches deep, and large enough to contain a good-sized wheelbarrowful of compost; two-thirds of this should be turfy-loam, and one-third well-decomposed animal manure, well-mixed together. Roses seldom thrive well in soil which has previously grown them for a number of years, it is therefore advisable, when planting in beds, to remove the soil to the depth of eighteen inches; drain well; plant without delay.

WORK TO BE DONE AFTER A THAW.

All frames must be uncovered as soon as it is thought the thaw has done its work within, but not before, and as early as possible every pot should be looked over. The first sunny morning should be chosen for this work. Remove all dead leaves and branches with scrupulous care, as it is from mildew the greatest danger is to be apprehended. Let the soil be stirred a little when required, and a search be made for slugs and snails, which may otherwise destroy what the frost has spared. Arrange the pots so that plants with bushy heads may not come together, but let as much space as possible be allotted to all such. When this is done have all your mats dried, and keep them in readiness for the next campaign, for this is only the beginning of January, and some hard-fought battles may yet be anticipated. Bulbs in pots should be attended to in the following way:—If the pots are in a frame, buried in leaf-mould, on removing the covering, the crocuses, tulips, and hyacinths will be found to have made strong shoots, and be evidently in a proper state for removal to the greenhouse or setting-room. Select those which have made the greatest progress and take them away; the others must have the leaf-mould returned to them. The pots intended for blooming should then be washed, and have the surface-mould stirred and neatly arranged. Place the pots in the greenhouse or near the glass in the setting-room, and the bulbs will rapidly

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exhibit their blossoms. Water must then be liberally supplied, increasing the quantity as vegetation advances, for it is astonishing how much a hyacinth in bloom will swallow up. Those returned to the frame may be examined from time to time, and they will form a succession to take the place of those now more advanced. If the work has not been done before, it will be well to take the advantage of a thaw to spread a layer of leaf-mould or other good compost over beds of tulip and other bulbs. After a frost bulbs rapidly push their leaves to the surface, and as frosts are still to be expected, this top-dressing will protect them. Rotten manure may also be put on the flower-beds to be dug in a month or two hence. Look also to the budded roses, and if in any case the matting is too tight about the bud, let it be loosened, or water may lodge and rottenness ensue. Carnations must be pressed into the soil when the frost has loosened the roots, and those in pots have all dead leaves cleared away.—BURGESS'S *Amateur Gardener.*

WORK TO BE DONE—JANUARY.

Auriculas are now nearly dormant; they will, however, need protection, and should the weather prove favourable the plants will be benefited by a top-dressing of good fresh mould. Give plenty of air on all favourable opportunities.

Azaleas.—Those in flower should be placed in the warmest part of the conservatory or show-house, and those with plump buds should be kept in a moist humid atmosphere of from 60° to 70° by day, and from 50° to 55° by night. (E. Cleeton.)

Camellias.—During this month we always hear sad complaints about the buds dropping off just when they ought to be coming into flower. This is in a great measure to be attributed to the irregular supply of water given; just give sufficient to moisten the ball of earth throughout, and then do not water again until the surface of the earth feels somewhat dry.

Carnations and Picotees.—These are as impatient of damp as the auricula. Pick off all decayed or yellow leaves; stir the surface of the soil, and give but little water. The plants are nearly dormant, and require, therefore, but little stimulant.

Chrysanthemums.—If you want fine specimens of large-flowering varieties, the cuttings should be taken off as soon as possible and planted in a mixture of leaf-mould, rotten dung, sand, and loam; plenty of drainage must also be used—oyster-shells answer this purpose. Encourage growth and get your plants on as forward as possible, as they flower much better when allowed to progress gradually at last. For pompone specimens, if you have

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where practicable. Nectarines and peaches will be better not pruned until next month.

Vegetable Garden.—Sow a few peas of the earlier varieties, such as Sangster's No. 1, Rendle's First Early, etc., and at the latter end of the month a sowing of second early sorts. Carefully pot seakale and rhubarb for forcing. About the fourth week in the month sow a few radishes of early varieties. Prepare your potatoe-ground by getting your manure wheeled on to it during the frosty weather. Give air to cauliflower plants in frames. Broad-beans should also be planted. Get forward any operations possible, such as preparing rods for peas, trenching, etc. Prepare beds for carrots and radishes. All unoccupied ground should have been turned up in trenches to mellow; good may still be affected, if attended to at once.

Greenhouse.—Keep all plants clear from decayed leaves. Most of them will be in a dormant state, and will, therefore, require less water. Avoid fire-heat as much as possible, giving only just sufficient to keep out the frost. Calceolarias and Cinerarias will very likely be dreadfully infected with the green-fly. Primulas will now be coming into bloom; and in waterng these be careful to pour around the edges of the pot, not into the heart of the plant. If any of the roots of the plants are becoming matted around the sides of the pots, they should be repotted into pots of larger dimensions. The seeds of all plants, geraniums, cinerarias, calceolarias, hoveas, and epacris may be sown, and put in a warm part. The best temperature at which the greenhouse can be kept this month, is that of 40°. Cutting winds must be carefully avoided. Prepare plenty of chopped peat, crocks, and clean pots, ready for repotting. Train anything that requires it, remembering that unless the plant be trained while young, it will always fail in making a fine specimen.

POSTSCRIPT.

We cannot leave our friends without thanking them for the kind manner in which our appeals for assistance have been met. We have already received several valuable contributions from old friends, and therefore can safely promise that the character of the "Midland Florist" will be upheld. To all who have kindly assisted in contributing papers to the present number we are especially indebted. We would earnestly impress on the minds of our readers the necessity of recommending us to their friends, and thereby increase the circulation. Again thanking all our friends, we would join in the old English and appropriate wish—

A Happy New Year to All.

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THE ORCHARD-HOUSE.

Since the insertion of an article entitled "The Amateur's Orchard-house," we have been frequently solicited to give some details as to the most approved method of constructing buildings suitable for the production of fruit. The advantages to be derived from the use of such buildings are readily seen. Many varieties of fruit will not readily come to perfection unless by the use of these artificial means. The following remarks are extracted from an excellent work published by Mr. Rivers, the well known orchardist at Sawbridgeworth:—"The Lean-to Orchard-house. Its length may be from ten feet to one hundred, or more, according to means or space; but its breadth and height should be according to the following dimensions, unless any improved plan may be suggested which will insure greater advantages at the same cost. I will suppose that an orchard-house thirty feet long is required. A ground plan, thirty feet long and twelve feet six inches wide, should be marked out. Then six posts of oak, or good yellow deal, five inches by three, and nine feet six inches in length, or of larch poles, sixteen inches in girth, cut in two, and the flat sides placed outward, must be firmly fixed two feet in the ground. The ground ends, before fixing, should be charred two feet six inches from the bottom, and then have a coat of boiling coal-tar, which adds much to their durability. They will form the back line of posts, standing seven feet six inches in height from the surface of the ground. For the front walls, six posts of the same thickness, four feet six inches long, must be firmly fixed eighteen inches in the ground, so that they stand three feet out. The respective heights of front and back are a matter of choice; they may be, and I think should be, exceeded by one foot in height for both front and back walls. Two posts will be required at each end; at one end, if only one door is wanted, these will form the door-posts. On these posts, both at front and back, must be nailed a plate, four inches by three, on which the rafters are to rest; the posts are thus arranged in two lines. Now then for the rafters. These must be fourteen feet long. A nine-inch deal—*i.e.*, a deal nine inches wide, and three inches thick—will make four, each four and a half inches by one and a half, or nearly so. These are light, strong, and the most economical of all. Instead

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of ploughing the rebate for the glass, which is great labour and waste of material, on the upper side of each rafter, exactly in the centre, must be nailed a slip of half-inch board half an inch wide; this will leave half an inch of the rafter on each side for the glass to rest on; not too much for glass twenty inches in width. The rafters are so far prepared for glazing, but not yet fitted on the plates at top and bottom of the projected house. No mortices must be made, but the rafter fitted to the back plate by cutting out a piece, and to the front plate by cutting out another piece. They must then be strongly nailed to the front and back plates, leaving a space between each rebate of twenty inches. A piece of thin quarter-inch deal board, six inches wide, should be nailed along the top to the end of each rafter, so as to be even with their upper edges; and in this should be a groove to receive the upper end of the pieces of glass. At the bottom, a piece of board, one inch thick and six inches wide, must be let in by sawing a piece out of each rafter for the glass to rest on, and to carry off the water. We have thus formed a sloping roof seven feet nine inches, with the plate, high at back, and three feet three inches high in front. The glazing is now to be thought of. The most economical glass is sixteen ounce British sheet glass, which can be bought at twopence per foot, and the size to be preferred twenty inches by twelve, placing it crosswise, as the rafters should be twenty inches asunder. The laps should not exceed a quarter of an inch, and they need not be puttied, as the ventilation is more free when they are not. I find that scarcely any breakage takes place from frost, owing to the large pieces being elastic. On and outside the back posts, three-quarter inch well-seasoned deal boards should be nailed. In the back wall thus formed, sliding shutters, in grooves, three feet by one foot, must be fixed to act as ventilators, two close to the roof, and two about three feet from the surface of the ground. If two more be added to the right and left of the lower shutters all the better. In summer it is impossible to give too much air. The front and ends, except the doorway, must have also three-quarter inch boards nailed on outside the posts, one of them, the upper one in the front, to be on hinges, so as to let down the whole length of the house, with the back shutters. When all are open, in hot weather, it will be ventilated thoroughly. To add to this (and it is all required in summer), the boards will shrink and let in air; a fierce sunlight is thus admitted by the large glass, and plenty of air, in which all fruit trees thrive to admiration. The boards and rafters should be painted with stone-coloured paint, which will give the house a very neat appearance.

"So much for the timber and glass. But when one sees that to walk along the centre of the building, which is about four feet

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nine inches in height, a person must be of very diminutive stature, the inquiry arises, how is head-room to be made? Simply by making a trench two feet six inches wide, fifteen or eighteen inches deep, in the centre of the ground plan. This will leave a border on each side four feet nine inches wide, and form a path at the same time. The front border need not be raised, as the trees, in two or three years, will require all the head-room they can have; but the back border should be raised about eighteen inches above the surface, supported by the brick or boarded edge to the path, for the sides of the path must be supported with boards or four-inch brickwork. It will be found a great improvement (for which I am indebted to a friend) to divide the back border into two terraces, by raising the back half twelve or fourteen inches, building a four-inch brick wall, and filling it with earth, so that the back row of trees is elevated, and thus escapes any shade given by the front row. The effect also is very good. Now, as everything depends on these borders (for there must be no benches and no shelves), care must be taken to make their surface loose and open. Loose materials, such as lime rubbish from old walls, and road sand, mixed with manure, may be laid on them about four inches deep; they may then be forked over to about nine inches in depth, well mixing the above materials with the soil. You thus have two borders, not too far from the glass, and *on* which your orchard will thrive admirably. It will appear odd to hear about trees thriving on, instead of in, a border; but when I explain that this is to be an orchard in pots, it does not seem so contrary to our usual garden culture. It will be seen, I think, by the description I have given, that the lean-to orchard-house is merely a low greenhouse, with its roof sloping to the south or south-west, such as may be seen in many of our small villa gardens; only, instead of having a path in the centre, and a bench on each side for the flower-pots to stand on, it has a sunken path, and a border of earth on each side, on which fruit trees in pots are to be placed."

This is Mr. Rivers' practical lesson; and to all who intend commencing miniature orchards under glass, we would advise a careful perusal of his interesting and instructive little volume. Sir Joseph Paxton has patented some new portable and economical glass houses, which, being composed of simple parts, can be enlarged, removed, or adapted to any horticultural purpose by ordinary labourers. Whilst they are adapted for permanent structures, they are also suited for persons having temporary or limited tenures, as they can with ease be removed and packed up at the expiration of the tenancy. In a future number we intend giving further details of this economical and useful invention.

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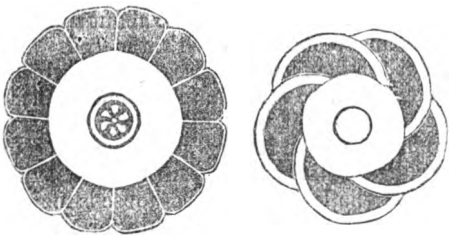
"THE PROOF OF THE PUDDING IS IN THE EATING."

MR. EDITOR,—Having had my attention drawn to an article on the Polyanthus, in a contemporary, I take up my pen to protest against the absurdity of uniting the properties of the pansy with that of the auricula or polyanthus. This correspondent (who by the way has a prodigious number of seedlings) desires, if we are to interpret his speech for his wish, to obtain a polyanthus quite different to anything we have hitherto seen, but lacking much the beauty and simplicity of our present standard flowers. Why not at once start for a triangular-shaped flower? The proposed improvement is, that the pip consists of five petals, similar to that of a pansy, although not extending to an eye and joining, like that flower, in the centre, but all joining around a circle of quite one-half of the whole circumference of the flower. I repeat that such a thing is absurd, nay, is impossible. The proper shape of a pansy is acknowledged by, I think, all to be a circle.



The two standards compared.

The auricula is also generally circular, but here we are shown that the march is retrograde, that we are to look for indentations at the edge, formed by the uniting point of two half-circles. Fortunately, however, the proposed alteration of the standard is perfectly imaginary, and is only looked for among a batch of unbloomed seedlings, which, when they do bloom, will, I suppose, be thrown away; for I cannot imagine that it would be tolerated for an instant. The true standard, and that accepted by nearly every polyanthus grower in the kingdom, is that laid down by, I believe, Mr. Glenny. The single pip or flower should be perfectly flat and round, and be slightly scolloped on the edge, and three-quarters of an inch in diameter. It should be divided in six places, forming six apparent flower-leaves, each of which should be indented

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in the centre to make it a kind of heart-shaped end, but the divisions must not reach the yellow eye. The indenture in the centre of the apparent flower-leaves should be exactly the same depth as the indenture formed by the join of these flower-leaves, so that it should not be known by the form of the flower which is the actual division and which is the indenture; in other words, which is the side and which is the centre of the flower-leaf, and all the indentures should be as slight as possible, to preserve the character. The tube should be one-fifth of the whole width of the flower, and stand up at the edge above the surface of the yellow eye. The flower should be divided thus:—The yellow tube in the centre being measured, the yellow eye round the tube should be the same width as its diameter; and the ground colour of the flower should be the same; or, draw with the compasses, opened to a sixteenth of an inch apart, a circle for the tube or centre; open them to three-sixteenths, and draw another circle for the eye; then open them further to five-sixteenths, and draw a third circle for the ground or dark colour. (This measure is for a flower only five-eighths of an inch diameter, but it is the easiest to explain the proportions.) Beyond these circles there is a yellow lacing, which should reach round every flower-leaf to the yellow eye, and down the centre of every petal to the eye, and so much like the edging that the flower should appear to have twelve similar petals. The ends of these twelve should be blunted and rounded like so many semicircles, so that the outline of the circle should be interrupted as little as possible. The tube should be nearly filled up with the six anthers, which are technically called the thrum, and the flower should not exhibit the pistil. The edging round and down the centre of the leaves, formed by the divisions, should be of even width all the way, and universally of the same shade of sulphur, lemon, or yellow, as the eye; and there must by no means be two shades of yellow in the eye. The ground colour should be just what anybody likes best, but clear, well defined, perfectly smooth at the edges inside next the eye to form a circle; and outside, next the lacing, a black or a crimson ground, being scarce, is desirable; but the quality of the colour as to clearness, rather than the colour itself, constitutes the property. This, Mr. Conductor, is what I consider to be the property of the polyanthus. Mr. Hammond kindly gave us some details of cultivation, perhaps he will, in a future number, let us hear from him as to whether or no these are the acknowledged points of standards.

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CHAT ABOUT CHRYSANTHEMUMS.

MR. CONDUCTOR,—Having been solicited by the Secretary of the Nottingham Chrysanthemum Society to act as one of the Censors at their exhibition, in November last, I accepted the office, and when there, was much pleased with the fine collection of well-grown specimen plants in pots; also the noble hall in the Mechanics' Institute, in which they were placed for exhibition. I have not seen in London a room better adapted for an exhibition than this. I think the arrangement of plants was not sufficiently attended to, as they were dotted all over the floor, and in some cases tall ones were placed before short, and pompones and large varieties mixed together; had there been a few thin boards placed on stands or tressels, from two to three feet high, against the wall round the room, and another up the centre of the hall, I think the effect on entering would have been grand, as the plants were in fine order. In London, we stage them all to give effect; we find the timber-merchants and builders very considerate in granting the loan of a few boards for the Society's use, very few of them charge anything, as it does not damage the boards. I was much disappointed in not having had an opportunity of a little friendly chat about the culture of the plants, after I had concluded my duties as Censor, but I suppose the exhibitors were all better engaged.

There is one more subject which I think of great importance to make the exhibition perfect, and this was cut blooms. I should like to have seen up the centre of the room, a long line of stands containing fine incurved-cut flowers, in 24's, 12's, and 6's; this would have made the show second to none I have seen. I hope next year the growers will turn a little attention to cut blooms; if a hint on their culture is of any use, I will give it; still my firm conviction is, that if they set about growing them, they need no instruction from any one, if what they have already done is to be taken as a precedent. I think it would be a great improvement to the exhibition next year, if the growers kept the large flowering varieties and the pompones separate; say six trained pompones, and six large blooming varieties, in separate classes. Respecting the mode of cultivating them, I am a strong advocate for growing on one stem. I do not see any advance in growing eight or nine stems in a very large pot, and the bottom portion of the stems divested of foliage. I think if we wish to see the skill of the cultivator brought out, he should grow a pompone on one stem, in an 8-inch pot, allowing one inch below the rim for water,

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with good foliage and well-shaped blooms, all out at one time, with as few sticks and ties as possible. These qualities, I think, ought to decide which is the best grower. Plants grown for exhibition are of very little use for any other purpose, as the labour is only performed to show what a skilful cultivator is capable of doing with a certain plant in a given quantity of mould; but I see no merit in growing as many plants as you like, and in as large a pot as you please. Where is the advance in floriculture by adopting this mode of growing? The training is simply a mechanical process, and quite secondary to cultivating.

CULTURE OF LARGE VARIETIES FOR CUT BLOOMS.

If you have any old stools of last year, select the strongest; take off all suckers but two, and if these grow out of the old stem, so much the better. Trim off the roots sufficient to plant them in a 48-size pot; let the compost be light loam mixed with rotten leaf-mould and silver-sand, be careful not to loose the leader; place them in a sheltered part of the garden, where they may be covered in bad weather; that is, if you have no cold frames. When the plants are well rooted, give them another shift into 32-size pots, the compost well-rotted cow-dung one-third, and two-thirds good forest turf chopped up small but not sifted, with a little silver-sand, mixed together, and plenty of good drainage; use as little water as possible, just sufficient to keep them healthy. When the plants are well rooted place them in the blooming-pots, say, 12-inch size; if you can put two plants in the large pot do, that will be four stems for blooming; let the compost be mixed as above directed. Secure each stem to a long stick, which should be put in when you have repotted the plant, so as not to disturb the young roots when started; give very little water, and endeavour to ripen the wood as soon as you can; never mind the bottom leaves dropping off, that is just what is wanted; take off all side-shoots as soon as they are six inches long, but be careful how you do it. When the stem of the plant divides itself in the crown, leave two laterals or divisions to each stem; never stop the first bud; but if the plant is very strong and succulent, and the bottom portion not ripe, then take the third bud to stop at for selecting the bloom from, when you have made sure of the flower-bud. I will suppose you have four shoots, and when subdivided there will be eight buds in a pot, and should the roots show themselves on the surface of the earth, lay on a top-dressing of chopped turfy mould. Begin to use liquid manure to excite the plant, such as cow, sheep, fowls', rabbits', or stable-dung, well diluted with water and used three times a week; as the bud swells and shows colour use the tweezers, to ease the calyx, and set the petals free as soon as possible. I

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any deformed petals appear take them out, and if florets come up between the petals take them out, also, as soon as you see them. Get the plants under cover by the middle of October, to protect them from frost and wet; if seediness shows in the eye, thin out the florets to cause the centre to fill in and incurve. If the blooms are forward, bend them down from the sun and light: this will preserve them three weeks after they are in full bloom. The dressing and taking out faulty petals and florets is quite a question to be decided by the societies, whether they will allow it or not; but it is a difficult matter to detect it, as it is generally done when the blooms are growing. If grown in open borders, treat them the same as above, and cover over, in the middle of October, with canvas, to keep them dry; if sharp frost sets in, put mats on the top of canvas, and also in the sides. Some growers set up candles all over the borders and keep them alight to keep out the frost; others, oil-lamps, when the weather is severe.

SAMUEL BROOME, F.H.S.

THE RANUNCULUS.

THERE are few men who have had so much experience in growing this flower as Mr. Tyso, who has recorded the results of his many years' experience in an interesting and practical code of instructions which he has published. At this season for planting we have great pleasure in recommending the instruction given to a careful perusal. Mr. Tyso is well known as one of the best, if not absolutely the best, grower in the kingdom, and we therefore doubt not but that the following passage, quoted from his treatise, will be read with attention by every reader of the "Midland Florist." The soil recommended is a rich hazelly loam.

"Decayed stable and cow-dung, in equal quantities, constituting together about one-third, added to two-thirds of loam, will, when mixed and thoroughly incorporated, form a compost for the main depth of the bed, reserving a portion of loam sufficient to make a top layer of soil two inches deep, to which about half the above stated proportions of well-decomposed manure may be added. It is of importance that the tubers should not be placed in contact with *fresh* manure, as it engenders disease in the roots, and consequent injury to the plants.

"PREPARATION OF THE BEDS.—Having chosen an open but not exposed part of the garden, which will admit of the beds being laid down east and west, remove the earth fifteen inches deep, and from three feet to three feet four inches wide, and fill the

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bed with prepared compost to within two inches of the surface; leave it thus a month, and then add the reserved top-soil. These operations are best done in autumn, that time may be allowed for the earth to settle. Another method, where the subsoil is light and very porous, may be adopted:—Excavate the bed fifteen inches deep, lay in the bottom three inches of mingled manure and loam, and then saturate it with manure water; cow-dung well stirred in water will answer the purpose. Next add three inches more of compost, and saturate that layer; proceed to add more similar layers, making a foot deep in the whole, and, after a few weeks' settling, add three inches of good healthy pulverized loam, with but little manure, in which to plant the tubers. The surface of the beds should be level, and not more than an inch higher than the paths, in order that the roots may be kept regularly cool and moist; and as the ranunculus thrives on a *firm bottom*, the compost should not be disturbed, at the time of planting, more than is just needful for that operation. During winter, the surface may be pointed up rough, to take the benefit of frosts, but in no case should this be done more than two inches deep. The beds may be neatly edged with inch boards, lead colour, and, in case named sorts are planted, should be numbered with white paint, to correspond with the numbers entered in the amateur's list. As a bed well constructed at the commencement will admit of several successive plantings, with an annual addition of fertilizing materials, it is worthy of the particular care of the cultivator, though the preparation at first may involve some little trouble and expense.

"PLANTING.—The best season for general planting is the last fortnight in February; the plants have not then to contend with the severities of the winter. In some favourable seasons, roots may be planted with advantage in October; they will have more time to vegetate and establish themselves, will make stronger plants, and will bloom more vigorously, and about a fortnight earlier, than if planted in spring. Considerable hazard, however, attends autumn planting, and it is not recommended, except by way of experiment to those who possess a large stock, and can afford to risk a portion.

"In fine weather, towards the close of February, rake your beds perfectly level, and divide them into six longitudinal rows for mixed roots, allowing four inches from the outside row to the edge; or, for named sorts, mark your rows transversely, at distances of five inches asunder, and plant six roots in a transverse row.

"Draw drills with a small hoe, one inch and a half deep, and plant the roots with the claws downwards, with pressure to secure them firmly in the soil, so as to be one inch and a half from the

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crowns to the surface. In order to secure a firm site for the tubers, some growers do not draw drills, but, after raking the soil loosely, press the tubers with the thumb and fingers to the required depth, and rake on them the surrounding soil. This can only be done in favourable weather, and when the soil is light and friable, and with attention not to break the claws of the tubers. When planting on a small scale, a dibble with a shoulder at the precise depth may be used; but in large quantities it is an inconvenient method, and planting at the bottom of a drill, with moderate pressure, and without disturbing the subsoil, is attended with similar advantages to the use of the dibble, and, in practice, will be found to have some points of preference. If the top-soil is light after planting, it may be gently beaten with the back of the spade. This operation, however, must be only done in dry weather, and may be repeated just before the plants come up."

Such are Mr. Tyso's instructions, and we can conscientiously recommend every reader to peruse the other chapters on after-management.

PINE-GROWING.

In recently looking over the pages of your excellent journal, the "Midland Florist," and Glenny's "Gardener's Gazette," I find several articles on the Hamiltonian system of Pine-growing, and which appear to condemn the old system to a great extent. Sir, as the pine has long been a favourite of mine, by your kind permission, I beg to make a few remarks in favour of the old system, together with a short account of some good fruit I have had the pleasure of seeing grown myself; but it is not my intention to enter into full detail upon the culture and management of the pine at present. I perfectly agree with Mr. Hamilton, that much time and labour have been lost by the erroneous practices pointed out in former treatises on this subject; but do not let him suppose for a moment that he is the only person who has deviated from the old rules, and that all other pine-growers adhere to them still; for most gardeners have a system peculiar to themselves. Neither let him imagine that he has gained the ascendancy over all other gardeners, because he can produce fruit sooner, with less trouble and expense, and more abundantly, upon the "stool" system. I find on the 56th page, Vol. xii. of the "Midland Florist" for 1858, an article in which Mr. Hamilton states that a friend of his had a Montserrat pine with seven suckers, all in fruit at one time, and their united weight was sixteen pounds. All practical

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gardeners know that most pines are very prolific, and will throw up almost any quantity of suckers, and will run into fruit almost at any time; but what, I would ask, is the worth of such fruit? Let me only ask the question if one good pine of eight pounds' weight would not have been a nobler ornament upon any gentleman's table, and of far more value than others of sixteen pounds' weight, and produced from the seven suckers? If I may be allowed to be a judge in this matter, I should say that it is not the quantity, but size and quality, which constitutes the excellence of a good pine. The Hamiltonian system may be more adapted to the convenience of market-gardeners, or such people to whom economy and a quick return is desirable. But where fine noble fruit is the object in view, it is, in my opinion, out of common reason to suppose that perfect fruit can be produced from suckers; for it is a well-known fact, that the finest and most delicious fruit has been grown by the old system. Having heard that a friend of mine had some excellent pines, about a month ago, I went over to the seat of L. G. Starkie, Esq., of Huntroyd Hall, near Padham, Lancashire, where, to my inexpressible joy and surprise, I found some of the most splendid fruit of Foden's Black Prince, King Alfred, and Montserrat pines that I have seen for a great length of time. I received a letter from Mr. Taylor, gardener, on the 23rd of this month, stating that he had cut a pine of the Black Prince, since I was there, which weighed six pounds and a half, measured seventeen inches round, and twelve inches deep. He has more excellent fruit growing, but will not be ripe for a month yet. Fruit like this is highly creditable to Mr. Taylor, as well as an honour to his master's table. In my opinion, the above-named products would be good specimens for Mr. Hamilton, or any other gardener, to take a pattern from at this season of the year. The best pines ever produced in this locality were grown at the seat of J. P. Entwistle, Esq., Foxholes, near Rochdale, Lancashire, in the year 1843, by the late Mr. Joseph Foden, comprised a pit of sixty fine plants, and consisted of the New White Providence, Envillas, Montserrat, together with his two favourite seedlings, the Black Prince and King Alfred. The whole of the sixty plants were cut from one pit the same season, and averaged eight pounds in weight one with another. Now, sir, these are facts; and facts are stubborn things to overthrow. But pines like those of Mr. Foden and Mr. Taylor stand as a sufficient proof of what the old system has done, and of what it can do still. Mr. Taylor has been in the gardens of his employer during the last forty years, and as head gardener during the last twenty-four years. He is an efficient man, and a most excellent pine-grower. My sincere thanks are due to him for the kind information he has sent me

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respecting the production of pines, which will ever be an honour to his name. JAMES FODEN, Gardener.

Lound, near Accrington.

THE ANEMONE.

SOIL.—The soil should be friable loam, in which gritty articles abound. Decayed leaves form an excellent basis for the compost. The manure to be added should be vegetable, in preference to animal, and be incorporated with the soil rather than deposited in a layer below the tubers.

TIME OF PLANTING.—There are two seasons for planting, viz., the middle of October, and the end of January. The early vegetation of such roots as are left in the ground, would intimate that the former is the most *natural* season, and undoubtedly October planted tubers make stronger plants, throw up more flower-buds, flower earlier, and when the season is favourable, mature finer blossoms than those that are planted in spring. The main drawback is, that the blossoms expand before frosts have ceased, and hence a larger amount of care and protection is requisite. A bed planted the first week in October, 1849, was in beautiful bloom the 12th of May, 1850; and on the 16th of that month the thermometer, only a few yards distant, registered 25°, which would have ruined the blossoms had they not been sheltered.

PLANTING, ETC.—Make a bed of your prepared compost in a sheltered spot in the garden, where the subsoil is pretty well drained. Three feet four inches will be found a convenient width, and at least fifteen inches in depth. Protect it from heavy rains, so that it be tolerably dry when required for planting. Rake the surface level, and mark the bed in cross rows. Plant five roots in a row, which will allow six or seven inches apart. As the tubers are varied in form and size, the hand or a trowel should be used in making the holes, two inches deep, and large enough to admit the root to rest evenly on the soil; avoiding much pressure, as the limbs of the tubers are often slenderly attached to the crown, and are easily broken off.

Anemone tubers are formed of irregular fleshy bunches, having a number of small protuberances called crowns; these crowns are distinguishable as tufted apices, or obtuse points, often a shade darker in colour than the surrounding skin. They are frequently found in clusters, near the centre, and sometimes singly at the extremities of the projecting limbs. They are easily recognized by the prac-

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tised eye, but as amateurs have frequently been known to plant them upside down, some attention to this matter is needful. The base or lower part of the tuber is known by the remaining fragments of the fibrous roots of the former year, unless indeed they have been very carefully cleaned away. The direction to plant the *right side upwards* seems very trite, but is not in this case altogether superfluous.

Subsequent Treatment.—Strew over the surface of the bed two inches of half-decayed leaves, for a protection against frost; but as the plants come up, attention must be given to liberate the rising foliage; the decaying leaves matted together by rains, will sometimes obstruct and injure it. As the leaves and flower-stems protrude through the ground in a double or folded form, they disturb the soil; and the surface around the plants should be eased, broken fine, or pressed, as may appear needful. Should the protecting materials be thought untidy as the spring advances, they may be carefully drawn off, and a top-dressing of short decomposed stable-dung and leaf-mould be applied, which will be useful in nourishing and sustaining the plants.

When the flower-buds appear, they may be thinned out with advantage. It will often be found that some of them are defective in formation, some of them blind, or without the complement of central petals; these of course should be pinched off to strengthen the remaining.

Water must be given in dry weather, preferring to supply it copiously twice a week, in the evening, to giving it in small quantities daily.

Weeding is such a routine matter, as to need no further remark, than—weed early, if you would do it effectually.—*From* Tyso's *Culture of the Anemone.*

VERBENAS.

Their name is legion, and no doubt the list which I should give would give a tight-laced florist a fit of the blues. I have, however, tried scores, yea hundreds, of varieties for bedding purposes, and have at last cut my collection down to a very few sorts indeed—sorts which I have found best adapted for massing and combining for good effect with other colours; and many may perhaps be startled when I say that I would not give up the Verbena Venosa for massing purposes for any other variety in cultivation, and I predict for this same Venosa a growing patronage as it becomes better known. The following are what I deem

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necessary and indispensable for effective flower gardening:—Venosa, mauve colour, distinct species, quite hardy; Purple King, purple, very free bloomer, compact habit, first rate; Mrs. Holford, white, large truss, free bloomer; Mrs. Trotter, brilliant scarlet, yellow eye, dwarf and dense habit, immense bloomer; Lord Raglan, crimson scarlet, large lemon eye, very effective; Defiance, bright scarlet; Mrs. Woodroof, bright scarlet, strong grower, good for large beds; Joan of Arc, rose, with white eye, immense bloomer. The above I have considered the best of all that I have tried in their respective classes, and they form the staple of my bedding stock. I mean to add the Duchess of Buccleuch, which, I understand, is to be sent out by the Messrs. Lawson. From its new and peculiar shade of colour, and its other good bedding qualities it will be first class. To those who wish for a more extended list of bedding verbenas, I will add the following:—Bedding Purple, Charles Turner, Evening Star, Lady Havelock, Blue Bonnet, Crimson Perfection, cardinalis, Crimson King, Cyclops, Etonia, Rosy Gem, Ariosto, Sir James Outram. Spring-struck verbenas always grow and flower the most healthy and freely, and where a few plants of each can be mustered and shifted into seven-inch pots by the 1st of February, they may be multiplied to about any extent by the 1st of May. As soon as shifted, they should be placed in a moist growing temperature of from 60° to 65°, where they can have a gentle bottom-heat and as much light as possible; under these circumstances they soon yield crop after crop of cuttings. The way which I have practised for years is to strike them rather thinly in pans and boxes, about five inches deep, filling up the bottom of the pans or boxes with a turfy soil and rotten dung, and on the top for the reception of the cuttings about equal proportions of sand, leaf-mould, and friable loam, sifted through a quarter inch sieve. The cuttings should be put in about an inch and a half apart, plunged in a bottom-heat of about 80°, in which, with the usual shading, they root in a few days. When rooted they may be removed to a pit or house, not quite so hot as their rooting quarters, and gradually exposed to the light, when they, in their turn, will soon yield another crop of cuttings. The lot first struck may be gradually hardened off as soon as the necessary lot of each sort can be made up of the old plants. There is nothing better for raising fine healthy verbenas than a well-prepared hotbed of oak leaves. I leave the verbenas in the pans or boxes in which they are rooted till planting-out time, when they are generally twice as strong and healthy as if potted off singly in small pots. The rough loam and dung adheres to their roots, and they can be turned out with a ball. In this way I had last season close upon

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eight thousand verbenas in a very little space, and when planted out they were as green and healthy as could possibly be wished. Those who wish to get a stock of verbena Venosa had better get a packet of seed and sow in stove-heat in February; and when the seedlings are large enough to handle, be pricked off into boxes or pans, and managed in the same way as other verbenas. It is easily propagated by lifting the roots in spring and chopping them into pieces—every eye on the roots will make a plant.

A PRACTICAL GARDENER.

—*From the Scottish Gardener.*

TULIP NOTES.

MR. CONDUCTOR,—The first number of the new series of the "Midland Florist" I have read with much pleasure; it is literally laden with practical information, just the work for every one who takes an interest in florticulture. The example set by 'A Midlander,' in giving notes from his tulip-book, is worthy of imitation, and will, I hope, induce many others to follow the same course; by these means many a misnomer may be corrected. There appears a discrepancy in comparing 'A Midlander's' note on Abbott's Gem with that on the same flower by Mr. Parkinson, who says it is decidedly a byblœmen, and if correct, requires no bleaching. He, however, admits that several varieties are sold out as Abbott's Gem. This is a great evil, and cries for redress, and if tulip-growers will only record their notes, from time to time, in the "Midland Florist," it will make the dealer more careful in sending out varieties true to name. I will just say, that I have Aglaia flamea from three different growers; one of them, from Scotland, is really XXX, and far superior to the others in marking and brilliancy of colour. DAN.—I am obliged to Dan for calling my attention to this discrepancy. Abbott's Gem with me is a purplish rose, although I cannot class it as a byblœmen, as I have only grown it one season, and as a change of soil and situation will cause colours to vary a little; I may be wrong, and yet right, mine was not pure by any means, having a good deal of yellow in it, and yet I am persuaded that it is true. However, I would at once bow to such an old grower as Mr. Parkinson. My notes are not quite ready for this month, and I therefore must defer them until the next number. I find, on reference, that others as well as myself have classed Abbott's Gem as a rose; perhaps some of the numerous growers will give me a description of the true Abbott's Gem.—

A MIDLANDER.

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THE DAHLIAS OF 1859.

THE varieties sent out last spring have no doubt taken their places, and have been approved or condemned according to their merits, by those who grew them. Yet, as there are many who do not add new varieties to their collections before the second season, a summary of the best, as they appeared to us, from growing several plants of a kind, may be useful to those who have not seen much of them at the exhibition, or growing.

Generally, 1859 was a good season for dahlias, and a long one; therefore, any good qualities they might possess could be ascertained. Of selfs we shall retain ten only; at the head of which stands the the best dahlia of any year, namely, Chairman, which is a magnificent show-flower. The others are Emperor, Golden Drop, Charles Waters, John Dory, Pioneer, Disraeli, Mentor, Lord Eversley, and Rosebud. In fancies, seven may be grown again; they are Comus, The Flirt, Mrs. Charles Kean, Jessie, Leonora, Dandy (rather small), and Madame Alboni, good form but scarcely sufficient to make it effective. From the Continent not one has appeared in 1859, self or fancy, that can be introduced to a select collection; Triomphe de Pecq, however, of 1858, maintains its position as the finest dark dahlia. It is late in blooming, but very true in character. One of the best stands of twenty-four we saw staged for competition in 1859, was at Reading. This collection contained five of the new varieties above named, viz., Emperor, Mentor, Pioneer, Lord Eversley, and Chairman. There were, also, seven seedlings, which we shall most likely have to notice in a future number. There were Enchantress, Flower of the Day, Lady Taunton, Gladiator, Mrs. Col. Vyse, George Elliott, and Scant. The remaining twelve were old kinds, of several seasons, the oldest being Robert Bruce, sent out in 1854. The rest were Colonel Wyndham, Mrs. Church, King, Mrs. Trotter, Village Gem, Sir J. Paxton, Lord Cardigan, Cherub, Lord Fielding, Lady Franklin, and Lady Popham. The number of good seedlings that came under our notice last autumn was above the average.—*The Florist.*

LOOKERS ON SEE MORE THAN THE PLAYERS.

As usual, this morning (being that period to which all interested in monthly literature look forward with eagerness) brought my

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batch of magazines, in one of which, "Gossip," I found such an exuberant violation of common sense as not only aroused my "hackle," but reminded me of other writings of a similar character. I allude to the opinion of "A. J. C." on the classification of auriculas, where he advocates classes for certain properties, and among these varieties of form. What! does he want a class for the elliptic, the triangular, the square? The circular form is that which is admitted by all auricula growers, who are "good men and true," to be the acme of perfection; and the day has not yet dawned when any other form may be aspired to by the ardent florist. And really, in this beginning of the new year, "A. J. C." would lead us into a quagmire of minotaur, or drown us in a whirlpool of mermaids, by the diagram of his *yet unbloomed* seedlings, the monstrosity of which is only equalled by its absurdity. If "A. J. C." can successfully unite the petal of the pansy with pip and paste of the auricula, which his diagram essays to do, let him rejoice in his work, when accomplished, and then publish a diagram of his achievements in floriculture. Pray, Mr. Editor, allow me to ask, for I am but a poor geographer, does Cheltenham lie near the Irish Channel? as this is the raciest bit of Hibernianism I have seen for many a day. LOOKER-ON.

Jan. 2, 1860.

PLANTING THE RANUNCULUS.

THE Ranunculus-bed will demand that fine pulverized character which is so favourable to the operations of the gardener, and a few days of dry weather will be indispensably necessary before this root can be safely committed to the ground. As it is desirable that the collection should be planted by the middle of the month, a right state of the earth should be diligently watched for and embraced as soon as secured. A few days earlier or later will not be of much importance, provided the soil is sufficiently dry to allow of its filling up the interstices of the tubers, securing that firm, yet porous state, so necessary for a healthy vegetation. The day being dry and fine, you may at once commence your operations by nicely levelling the bed, which should be perfectly flat and not raised in the centre, a practice of which inexperienced gardeners are so fond, and which is so often injurious. As the ranunculus naturally requires a low, marshy soil, it will demand in its cultivated state a great deal of moisture; and therefore, the bed should be below the level of the garden rather than above it, that drought may be repelled as long as possible, and that arti-

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ficial watering, when necessary, may be most effective. In levelling, let the surface only be stirred, as some degree of firmness in the subsoil is advantageous to the plant. Have ready the roots in the papers with the names, some neat wooden labels, and a quantity of clean white sand; then, determining to brave the cold wind which may be blowing, and not to be discouraged by the back-ache, proceed to commit to the earth the humble-looking tubers, which in four months are to develop so many beauties. About four inches apart every way, is probably the best distance at which the ranunculus should be planted; and the amateur should, therefore, regulate the size of his bed by the number of roots in his collection, and dispose them equally all over it. With a cord and small trowel draw a straight furrow across the bed, beginning in the centre and advancing to the edge with successive furrows, that the planted roots may not be interfered with; place the roots so that the crowns shall be one inch and a half beneath the surface when the bed is completed; and having thus filled the furrow with tubers, four inches apart, drop a little sand on each, sufficient to cover it, and draw the excavated soil over the whole. Make another furrow four inches distant from the first, and proceed as before, until that side of the bed is finished; then operate in the same way with the other side, and the work is done. A slight pressure with the hand should be given to every row, as the work proceeds. With regard to the labelling, I have found the following plan the best:—As each root is taken out of the paper, write its name on the painted stick with a strong lead pencil, and place root and label into the furrow together. The stick should be about one inch distant from the root, and must be fixed in rather firmly, as I have found the sinister perambulations of a cat (Oh, name abhorred by the votaries of Flora!), sufficient to throw them into confusion. If the writing is always turned the same way, either toward or from the root, all ambiguity or mistake will be avoided. Although the genial days we sometimes have in February allow the operations of sowing and planting to be carried on with advantage, it often happens that severe and continued frosts set in after the ranunculus-bed is completed, and the hopes of the florist are committed to it. This probable evil must be guarded against; although the tuber will sustain a hard frost when it is really rooted, it is very sensitive when that is not the case. If a frost should come, a mat laid upon the bed will avert injurious consequences; or two may be used if the weather is severe. If in the day the sun has power to unbind the soil, the mats may be taken off and the warm rays admitted; but be sure the mats are replaced at night. If the weather is auspicious, about three weeks will be sufficient for bringing the

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young shoots to the surface, when further care, as to cold, will be unnecessary. An operation must then be attended to of the utmost importance, both to the future bloom and to the increase of the tuber. When the leaves are about half an inch above the ground, the soil must be firmly pressed round them, so as to fix the tuber firmly into the ground. This may be done twice with advantage as the growth proceeds. Lightness of the soil has been very fatal to the ranunculus, and must, therefore, be guarded against in the manner described.

The manipulations which have been mentioned in this paper are rather laborious, from the long continuance of the stooping posture, and they will probably discourage those who are not thoroughly imbued with a love of flowers. But the resolute amateur will remember that no good results are ever secured without toil, and he will be cheered in his labours by the brilliant prospect before him. Although it is only a luxury, the production of which he contemplates, he may, without presumption, exclaim—

> "Be gracious, heaven; for now laborious man
> Has done his part. Ye fostering breezes blow!
> Ye softening dews, ye tender showers, descend!
> And temper all, thou world-reviving sun!"
>
> BURGESS' *Amateur Gardener.*

NEW AND RARE PLANTS, FLOWERS, ETC.

ROSES.—*Anna de Diesbach* (H. P.)—The florist will probably object to this flower because it shows its stamens, but for all that we are of opinion that it will become a favourite with nine-tenths of our rose amateurs. It comes nearer to Souvenir de la Reine d'Angleterre than to any other pre-existing kind, yet differs from it in many respects. The colour, a pure rose, is clear and decided; the flower is nicely cupped, very large; the petals of good size and substance; the growth is robust, and the plant well clothed with handsome foliage. Both in the forcing-house and out of doors it was one of the most attractive of the new roses. A child of the sunny south, it was nurtured and brought before the public by Monsieur Lacharme, a well-known cultivator and hybridist, in the autumn of last year.

President (Tea-scented).—The entire stock of this beautiful rose is at present at the Cheshunt nurseries, whence it will be sold in April, 1860. The present proprietors cannot claim the honour of originating it, having bought the stock. Something in the way of Adam (tea), it differs sufficiently from it; the salmon and

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fawn colours so much sought after in the tea-scented roses largely predominating in the expanded flower. It is also hardier in constitution than Adam, and consequently better as an out-door rose; it blooms freely, and is very sweet. In the forcing-houses at the Cheshunt nursery, where nearly four hundred varieties are cultivated, the President and Madame William were the most conspicuous and best among tea-scented roses last spring.

Évêque de Nîmes (H. P.)—This rose is a seedling from the Géant des Battailles, and was raised by Mons. Damaizin, of Lyons from seed given to him by M. Plantier, an amateur of some celebrity. The flowers are the colour of red sealing-wax, often dashed with blackish crimson; the petals are very thick, sometimes crumpled in summer, but smooth and well formed in autumn. The plant blooms freely at both seasons, and the flowers are of an average size. The habit is robust, the shoots very spiny, the foliage broad, leathery, and singularly handsome.

Queen of Denmark (H. P.)—There is an alba rose of this name—one of the gems of the olden time, now little cultivated—with which the present variety must not be confounded. The subject of our plate (*i. e.*, Queen of Denmark) was, we believe, raised and introduced by Mons. Granger, a horticulturist at Saisnes, in the canton of Brie-Comte Robert, and is known also under the name of Etoile de Marie. The flower is very large, and quite full; it has two phases, the cupped and the globular. The colour is transparent flesh, slightly shaded with lilac; the plant is of hardy constitution, though of moderate growth.—*From* Mr. Paul's *Rose Annual.*

THE AURICULA.

Before continuing my remarks on the culture of this much-neglected favourite, allow me, Mr. Conductor, to congratulate you on your improvements. I am heartily glad to see the "Midland Florist" so cheaply, so neatly got up. The excellent commencement you have made to meet the growing requirements of gardeners will, I am sure, be greatly and universally appreciated. I am sure that it is not only a duty, but also a pleasure, to recommend it among our friends, and I hope that there is not a single reader or subscriber who will not do something towards extending its circulation. But the increase of the circulation of even the "Midland Florist" was not the subject I intended to treat upon in this paper, and, therefore, craving pardon for the digression, I will at once commence.

The Frame.—Mine is simple. I own, as far as gardening

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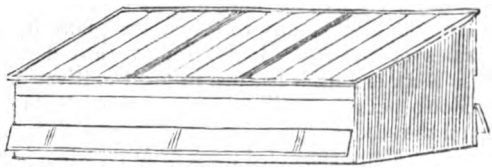
goes, to being very economical, and I therefore constructed my own frame of three-quarter inch boards; it is about six feet long, about three and a half feet wide. The height in front is about two feet six inches, while at the back it is about a foot higher. The sashes may either be hung back or front; I prefer the hinges to be in front, although I am well aware that the general practice is to have them at the back. Inside the frame I have a stage, constructed of seven shelves, on which to place the pots. Ventilation is a very necessary point. I formerly perforated my frame with holes all the way round, but I found that advantages were frequently to be derived from having a frame so constructed as to allow of that side on which the wind blew roughly to be entirely closed; I therefore plugged up every hole, and, to secure a ventilation, adopted the plan shown in the accompanying sketch, of having a flap-door the whole length of the frame, both back



and front. More auriculas are destroyed through want of ventilation than any other cause. Some persons have, instead of the flaps back and front, sliding loopholes for the admission of air; others have their frame so constructed as to turn round on a pivot. The shelves on which the pots are placed should be so constructed as to be about one foot from the glass. I always place my frame on a good bed of coal ashes, which not only preserves the wood, by rendering it drier than if placed on the garden soil, but also keeps the frame more clear from vermin. I do not generally advise brick frames, although it is by no means impossible to succeed with them; neither do I advise that dark boarded shutters be used, as they are extremely liable to draw the plants up. Should protection be required, throw over your frame a common garden mat, but by no means keep it on longer than necessary. An excellent and cheap method of preserving the wood is to paint it, or else to cover it with tar; the latter method, although not so agreeable, is very efficacious.

Potting.—Auriculas are extremely impatient of wet, therefore such pots should be selected as will secure good drainage. In the Midland Counties, I believe, the pots are termed quarts; they measure about six inches in diameter, and have good large

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others their plants in pots, etc. Discouraging as this may be, let us hope there are a very great many who have had no losses, and are ready and willing to assist their unfortunate neighbours out of their abundance. Nevertheless, those who have experienced losses, must be up and doing. Remember, "a bird in the hand is worth two in the bush," and they are best off who can help themselves. And who are they who cannot raise plants of cauliflower, cabbage, and lettuce from seeds ready for planting out in April? At once set your head to work in contriving, and, with a resolution, carry out the plan best suited to your circumstances, whether it be in your windows, in pots and boxes; in your garden, on a little bottom heat of sawdust, or other material to produce heat, sowing them in a tea-chest or soap-box, with a few pieces of glass or glazed calico over them, or in frames or pits; and to those who have lost flowering plants, and cannot afford to replace them by purchasing others, a few shillings spent now in making a "good selection" of seeds, which, properly attended to, will produce thousands of beautiful plants by May.

I am sorry to say there are a many gardeners as well as amateurs who look at catalogues of seeds with less attention than a placard on a wall; and in going round some gardens, they exclaim, "Oh, what beautiful plants!—how fine this, that, and the other; such and such are new to me. Pray, where do you get your seeds from? I have them from Mr. So-and-so." Probably they both purchased from the same place.

But our successful friend examined his seed catalogue as carefully as if he was searching a document to claim some property, and he also had obtained some knowledge of the plants such and such seeds produced; and, further, he had not neglected them through their stages of growth; and when he planted out in May or June, he felt a satisfaction that he had *prepared the ground well for them.*

Supposing all nurserymen and seedsmen were to attach a label to every article they sold for one year, with the words, "*Prepare the ground well for it,*" perhaps it might arouse attention to its importance. Prepare the ground well for seeds or plants, is the keystone to success in good cultivation.

The subject is not new. Old Samuel Gilbert strongly recommended it in his day, and at page 14 of last month's "Midland Florist," Hogg tells us that Matthew Kenney, in growing the auricula, "sweetened his composts by frequent turnings." Depend upon it, from the days of Adam to the present time, that of the thousands of failures that have yearly occurred in the culture of vegetables, fruits, and flowers, more than ninety per cent. may be attributed to the soil not being well prepared, wanting frequent

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stirring at depths suited to the requirements of the plants. Yes, and something else—the atmosphere, which is of very great importance, could not enrich it with gases, the surface of the soil not being in a favourable condition to absorb them. Some two hundred or more years since, there lived a famous agriculturist, named Jethro Tull; such an enthusiast was he for stirring the soil, that he formed an opinion that crops could be produced without the aid of manure. Lately I perused in the "Field," some extracts from a book published in 1859, on agriculture, by a Mr. Bennett, who might be styled a disciple of Jethro Tull. The excellent example and practices pursued by the Rev. Mr. Smith, of Low Weedon, are striking proofs of the importance of the atmosphere enriching the soil where frequently stirred. Mr. Rivers, in an excellent article on orchard-houses, in the "Cottage Gardener," of December, gives an extract from a letter received from a gentleman, referring to the mode in which the Greeks threw up the earth between their vines in ridges, their object being to enrich and sweeten the soil by exposure, adding and mixing manure with the ridge of earth before returning it to the roots, which, it also appears, they pruned annually. In thus advocating the importance of the frequent stirring of the soil, I do not wish to be misunderstood that vegetables, fruits, and flowers will, as a general rule, attain to perfection in all soils without a sufficiency of food in the shape of manures adapted to their wants. It is fearful to think of the loss of manure of various kinds which should enrich the soil, and the loss of the soil is twofold—wasting valuable manure, and neglecting the benefit of the atmosphere. I would say to every one, make it this year your motto to *prepare* the ground well for all crops, and would advise that the motto be kept as constantly before you as possible.

Frosty mornings, from now till April, are favourable opportunities for operating, and I find a steel digging fork an admirable instrument for this purpose. The same operation performed from April to June in the middle of the day, when the sun shines, will greatly assist in adding warmth to the earth, and in the destruction of all weeds.

In Notes and Queries of last month, a correspondent asks for a yellow rose for a south-east wall. I have two Cloth of Gold planted on such an aspect to the front of a house, six years ago, which have been the admiration of many. Before planting, the ground was well trenched, and holes made four feet in depth and width; at the bottom was a layer of bones nearly a foot thick; over them a layer of half-charred refuse and turf; then night-soil, mixed with charred refuse; and, lastly, some well pulverized compost to plant them in. The best time for pruning is in July,

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when the chief crop of flowers is over. Another correspondent complains of the failure of his pampas grass; it is probable that he has got a female plant, which does not yield flowers so freely as the male kinds. I have more "Odds and Ends" in store, and will next month notice the pampas and other grasses. The Messrs. Sutton, in their catalogue and amateur's guide, have an excellent engraving of pampas grass.

To those who are looking out for plants possessing fine foliage, and otherwise ornamental, which can easily be raised from seed by the many, I would recommend a perusal of the catalogue of flower seeds of Mr. Thompson of Tavern Street, Ipswich, as it gives an excellent description and treatment of many novelties. I have been thinking that articles on the raising of plants from seed would be very interesting and instructive to many readers of the "Midland Florist." Perhaps Mr. Thompson, who is the author of two works on flowering plants, would favour us with an article in this department—I for one should be very happy.

To do justice to all the plant and seed catalogues of the present day, I might fill volumes. There is Butler and M'Culloch striving to excel, and the Messrs. Carter's invaluable "Gardener's Vade Mecum," with a host of others all up to the mark. All may run and read, but *think first*, keeping in view the motto for the year, PREPARE YOUR GROUND WELL. J. K.

NOTES AND QUERIES.

[We shall feel obliged by any Correspondent or Subscriber forwarding answers to any of the following queries.]

BRANCHES OF APPLE-TREES TAKING ROOT, W. W.—The paragraph you allude to appeared in Paxton's "Horticultural Register." Mr. Brooke, a well-known contributor, says:—If the branch of an apple-tree be taken off whilst it is in blossom, and immediately planted in swampy ground, it will take root and bear fruit that season. This mode has been tried with success, therefore it is probable that the branch of a pear, peach, plum, mulberry, or any other fruit tree, if taken off in spring or summer, whilst the tree is in full sap, will also take root and become a new tree. Thus, choice sorts, such as the old nonpareils, golden pippins, etc., may be for ever sustained.

MYRTLES, R. H. R.—We cannot explain how it is that your myrtle-tree, which, you say, a short time since turned from a common green into a variegated variety, and again from a varie-

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gated variety into a common green. You cannot adopt a better time than the present to prune your specimen. Remove about an inch or two inches of the present soil, which replace with good rich loam, intermixed with a little rotten manure.

SELECT LIST OF HOLLYHOCKS.—For the information of brother florists who have not the opportunity of seeing all the new flowers compared with the older varieties, I enclose a list of what I consider the best eighteen Hollyhocks for all purposes yet let out:—Queen of the Buffs, pale buff, fine; Lady Middleton, rosy crimson, suffused with salmon; Empress, fawn; Walden Masterpiece, orange and scarlet; Mr. Roake, pale yellow; Flower of the Flock, primrose; In Memoriam, maroon; General Havelock, bright ruby scarlet; Beauty of Walden, rosy carmine; Sir Colin Campbell, bright cherry crimson; Beauty of Minden, white; Memnon, bright rosy crimson; Plutarch, rich plum, fine; Beauty of Dysart, blush; Pink Noisetté, light pink; Purple Perfection, purple; Hon. Mrs. Ashley, lilac peach, fine; Queen of the Yellows, golden yellow.—GEORGE BOSTON.

PROGRESS would feel greatly obliged with articles in the "Midland Florist" on hybridizing vegetables, fruits, and flowers.

ROSE EVEQUE DE NIMES (JACQUEMINOT).—This is not, as you suppose, a new rose raised in England, but at Lyons; comes from Géantd es Battailles. The flowers are of an exceedingly bright colour, petals thick, and generally well formed; a free bloomer.

LIST OF FLORISTS' FLOWERS.—Will the contributors of the "Midland" be kind enough to give, as they did two years ago, lists of select florists' flowers—tulips, roses, pelargoniums, chrysanthemums, cinerarias, and pansies?—Yours, etc., A SUBSCRIBER FROM THE COMMENCEMENT. [We are obliged for the hint, and shall be most happy to receive from all friends lists of the best flowers, which shall be duly inserted.]

BEST POMPONE CHRYSANTHEMUMS.—A tyro at Chrysanthemum growing would feel obliged by a list of a few of the best pompone chrysanthemums for exhibitional purposes. [A tyro will find almost any of the following answer his purpose:—Sainte Thias, Bob, Brilliant, Madame Rousselon, Requiqui, Duraflot, Cedo Nulli, Golden Cedo Nulli, Mustapha, Bijou de Horticulture, Drin Drin. Mrs. Dix is a splendid variety, and was exhibited very fine last season.]

CLARKIA, T. W. R.—The new Clarkia exhibited at the Horticultural Society's Floral Committee, is very large, good colour, and was commended. It is called Clarkia pulchella integripetala.

WATER FOR PLANTS, S. W.—The best water for plants is rain water, which is to be preferred by far to spring water. Rain water contains a certain amount of ammonia, which is a valuable ferti

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Epacrises.—Cut the shoots back when done flowering, and keep the plants close until they break afresh.

Fuchsia.—The growth of all fuchsias should be encouraged as much as possible, training the plant into the required shape, stopping if you wish for bushy plants. Cuttings will strike freely in a little heat. Liquid manure will be found beneficial.

Hollyhocks.—Attend to last month's directions, which are equally applicable to this. Repot young plants; cuttings may be taken, which will succeed. If the weather is extremely favourable, planting may be proceeded with.

Pansies for exhibition should be at once repotted, using a good loamy soil, placing the plant as near the glass as possible, but not allowing them to touch; keep dry for a few days, after which water moderately; give air freely on all favourable opportunities; all forward bloom may be removed. Six-inch pots will be found the most convenient for general cultivation, those out of doors may, towards the end of the month, be top-dressed with some rich mould; destroy slugs as they appear, pegging the shoots down to prevent them from being broken by winds. Beds may be made if the weather be genial towards the end of the month.

Pinks.—Should the weather prove fine, lose no opportunity of stirring the surface of the bed, adding a little good, rich loamy soil when requisite; keep free from weeds, and guard against slugs.

Polyanthuses.—Those grown in pots must be taken out of the frame, and well attended to; remove all decayed foliage, take out the soil to the depth of two inches, which replace with rich compost. Protect the plants from cold cutting winds, look well underneath the leaves; sometimes when all appears healthy and right, there is a great number of little green-fly dealing with us treacherously. All plants in beds should also be attended to, protecting and top-dressing.

Roses.—As the weather stands, pruning may be deferred until the first week in March. If, however, it should turn uncommonly mild, a few of the Moss gallica and Provence may be at once pruned. Those in pots must be carefully attended to.

Ranunculus.—Those who grow this flower will find ample directions for planting in two articles in the present number, rendering further directions here unnecessary.

Tulips.—Continue to protect, as directed last month. Before the tulips make their appearance, the bed should be arched over with bent iron, forming supports which, crossed with pantile laths, make an excellent groundwork on which to place protection.

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PELARGONIUMS.

HAVING noticed, in the February number, that an inquiry was made for lists of a few of the best plants, I have much pleasure in offering my opinion; and I would say, that were I in want of a dozen geraniums, I should prefer the following to any other:—

Aurelia (Beck's).—This is a large, bold variety, with large, well-shaped, velvety petals. The colour is rosy purple, with fine white centre, and very conspicuous; upper petals have a rich maroon blotch, and a narrow margin of bright rosy purple. It is a free bloomer, and a good grower. It is distinct from all others, and a specimen of it tells very much at an exhibition.

Blink Bonny (White's).—This variety has not been seen by the public so much as it deserves to be. It is a rich crimson flower of beautiful texture. The upper petals have a black blotch, with a fiery margin. It is of good shape, and a very free grower.

Criterion (Foster's).—This is a large rich rosy crimson, with black blotch. It is a good-shaped flower, and habit strong, very showy and good.

Etna (Turner's).—A high-coloured scarlet flower, very attractive, and is very useful for exhibition, being distinct from any other. It is tolerably free in habit, but is a little laid in breaking; like the generality of the high-coloured flowers, it throws up a large truss.

Fairest of the Fair (Beck's).—The most free-blooming plant we have ever seen, much resembling a fancy. The flower is very distinct, being a pure paper-white with a long feathered cherry-coloured blotch. The trusses form themselves in great profusion, and although it is not what can be called a good-shaped flower, yet in a mass for the home stage, or for exhibition, it is greatly to be admired. It is a good grower, but rather difficult to propagate.

Lady Canning (Hoyle's).—A very pleasing bright flower, and useful for the home stage or for exhibition; the colours being very attractive, large rose with white centre, dark upper petals shaded with rose, and a bright margin.

Leviathan (Hoyle's).—A useful, large, purple flower, with black blotch on the upper petals. Good purple flowers are much wanted, and we must, therefore, content ourselves with those which do not altogether reach the standard of perfection. It is singular, but not less true, that in raising seedling geraniums, few purple are to be found among the batch; there is scarcely one that may

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be called a good purple; this colour seems as difficult to get as a good scarlet.

Rosalie (Dobson's).—A standard variety for the home stage or for exhibition; colour rosy scarlet under petals, with black top. This is an improvement on Governor-general, both in colour and shape; it is also an excellent grower, and is a very free bloomer.

Rose Celestial (Turner's).—A first-rate show flower. It is very large and distinct, being a beautiful soft rose lower petals, and clear white centre. The upper petals have a maroon blotch, shading off to rose; tolerably good shape, very good habit and free bloomer. A general favourite.

Ringleader (Dobson's).—A useful flower for exhibition, having large bold trusses of bloom, lower petals pale rose, with distinct white centre, and maroon top petals. Large flower.

The Bride (Beck's).—Without exception, the best white that has come under my notice, and is the nearest approach to Mr. Glenny's idea of varieties being raised requiring no sticks. Its beautiful dark-green foliage and abundance of bloom, together with its pure white petals and distinct rosy carmine blotch, renders it an especial favourite.

Sanspareil (Hoyle's).—I ought, perhaps, not to include this in my list, it being a spotted variety, but as there is seldom a collection shown without it, is the reason for my noticing it here. It is too popular a kind to require any recommendation of mine, and although report says there is a new one to supersede it, yet it will be a long time before this variety is given up growing. The colour is soft rosy lilac, having maroon spots on all the petals; it is a profuse bloomer, and excellent habit.

Although giving a preference to the foregoing, yet there is another twelve which have a claim to the notice of those who are fond of variety. They are all very free bloomers and good habit, and may be grown by the most inexperienced, namely:—

Carlos (Hoyle's).—Mottled rose.
Desdemona (Fellowe's).—White, with maroon blotch.
Eclipse (Dobson's).—Large deep rose.
Fair Ellen (Story's).—White, black blotch.
Gem of the West (Fuller's).—Fine dwarf white.
King of Scarlets (Turner's).—Bright rosy scarlet.
Lucifer (Fellowe's).—Rosy scarlet, distinct.
Miss Foster (Turner's).—Rosy crimson, very attractive.
Richard Benyon (Hoyle's).—Orange crimson.
Rose Leaf (Dobson's).—Very bright rose, quite distinct.
Selim (Beck's).—Crimson purple, fine.
Viola (Hoyle's).—Very pale lilac, free.

In giving the foregoing lists, I have excluded all those which

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were not let out previous to last October; but as some of your readers may be anxious to know which are really the best that were let out in October, and since, I will just name those which I noted down, as particularly good.

Autocrat (Foster's).—A good showy flower. Bright lower petals, veined with crimson; upper petals having a black blotch. Likely to prove a good kind.

Bacchus (Foster's).—A kind of mottled crimson lower petals, deep maroon top. Very free and good.

Cherub (Dobson's).—A great improvement on Miss Foster, which it much resembles. Rosy crimson.

Hesperus (Beck's).—Bright salmon, distinct from anything we have seen. Free bloomer, from what we saw.

Hyperion (Dobson's).—Rich crimson-scarlet, good shape; quite distinct.

Lord Clyde (Foster's).—Very bright scarlet, of good habit, and free bloomer; very fine.

Few who attended the metropolitan shows during last season will forget the excitement caused by the appearance of a variety called Lightning, nearly every one who had a pocket-book stopped to take its name, and exclaimed, "I must have that." From this fact, one might judge that letting it out would be a good speculation. But how surprised were we to find that it does not maintain its original character, and is being let out at a very low price. This circumstance alone should guide us in not recommending any flower which has not been thoroughly tested by ordinary cultivation. By ordinary cultivation I mean such as any geranium-grower may pursue, without having recourse to some artificial means.

Before closing these remarks, I cannot help mentioning a circumstance respecting these new Pelargoniums, I mean such as are figured in the "Florist" for December, 1859. Now, if a drawing is to be considered a faithful representation of the subject figured, I must say that Lord Clyde is not superior to Phaeton, a variety sent out in 1854, five years ago. To prove what I have advanced, I would refer the reader to the "Florist" for September, 1854; compare that plate with the one for last December, and it can but be admitted that there is no visible improvement in shape or colouring, in fact, they seem almost a *fac simile* of each other.

JOHN DOBSON.

Woodlands Nursery, Isleworth.

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RED AND YELLOW ROSES.

The best dark crimson, or purple crimson roses, fit for show, are, among summer roses, Boule de Nanteuil, General Jacqueminot (H. C.), Napoleon le Grande, Ohl, and Triomphe de Jaussens.

Among lighter hues, Paul Ricaut and Kean.

Among autumnals, Triomphe de l'Exposition and Triomphe de Paris are best. Their habits are good. Paul Joseph and M. Masson are splendid roses, where they can be grown. Le Lion des Combats is beautiful, and grows and blooms well on Manetti. Reveil (B) is splendid, and of good habit.

"Bourbon" would do well to make inquiries about Allesse Imperial, Eugene Appert, Le Vesuve, Empereur de Moroc, George Peabody, said to be like Souchet. I have six plants of it just come from America, from the raiser, but have not bloomed it. He must also inquire about Francis the First, Francis Arago, and Lord Elgin. The last rose I have bloomed, and it appears to be a nice dark rose, in the "way of," but better than Arthur de Sansal and Comte de Beaufort.

I can recommend Solfaterre as a rose-tree that will do well for a south-eastern wall. I have never succeeded anywhere yet with the Cloth of Gold; but it is grown on eastern walls in this neighbourhood. There are four splendid trees of it, of from 16 to 36 feet high, so situated. Two are on their own roots, and two are on the briar. The 36-feet tree was 46 feet high (on a one-foot briar), before the late hurricane which sent the "Royal Charter" on shore, whipped it.

Where the Cloth of Gold will not grow, Gloire de Dijon will succeed. It is the best supply for the Cloth of Gold, of any size. It is a most noble rose, a robust grower, equally good on both stocks, good everywhere, even in the bluff of the wind—good early, in the middle of summer, and late. It has this singular faculty, viz., of throwing out long shoots, and blooming all the way up the stem.

"Jacqueminot" would do well to plant both these roses, a yard apart, in the "centre" of a wall, and then, if one succeeds, he can remove the other. It is of no use to plant Solfaterre, unless there is abundance of room "above," and on "both sides." If the space is contracted, I would advise him to plant Gloire de Dijon.

Rushton Rectory, Feb. 3. W. F. Radclyffe.

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GLASS-FRONTED HOUSES.

The framework of these fronts should be formed of galvanized iron, which can be painted, or left as erected. In raising them, they may be placed at any distance from the house, and may start from the foundation or the first-floor balcony; but opposite every house-window should be formed a casement the exact size of that window, which may be opened at pleasure, when the full current of the exterior atmosphere is required.

The advantages secured are dryness, preserved brick-work, adjusted ventilation, cheerfulness, and quiet.

By keeping the foundations of houses *dry*, we not only keep the whole building dry, and preserve the structure from decay more effectually than it was performed by the overhanging storeys of centuries ago, but we add considerably to the health and comfort of its inhabitants. The expense of a few panes of glass occasionally at the present day would be much less, too, than the painting of stucco, and little more than the facing, and pointing, and repairing of brickwork.

For *ventilation* we should have the option of opening a window to the street, or only into the encasing glass structure, thus ventilating or getting rid of superabundant heat; in the latter case, without cold draughts or excessive dampness. By means of openings at the lower part and at the top, the play of the summer sun might be made to create a current of air even in the stillest atmosphere. The *cheerfulness* imparted to the street by the flowering balconies, or the "greenery" of the walls, would tend not a little to reconcile a town population to its abode, and improve the tone of manners and conversation of cities by elevating the spirits of its inhabitants.

Bad sleepers and sick people would bless us for the change; and even that trivial thing *quiet* would help to recover many a patient, and prevent many a jaded mind from running the course of brain fever or madness, so often the lot of the sleepless.

J. F.

JOTTINGS FROM AN AMATEUR'S NOTE-BOOK.

Although in the middle of a February snow-storm, we may still be permitted to indulge in dreams of returning summer, and with that season, of our floral pets. Our northern winter has been

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most severe and protracted, and so, in proportion, will most of our plants have suffered. The hardier races of florists' flowers, such as pansies, auriculas, polyanthuses, and pinks, should never, however, be treated as if they were greenhouse plants, although a certain amount of protection is indispensable. No more certain plan can be adopted of having a weakly and diseased stock of the above-mentioned flowers, than confining them closely in cold frames.

Let us take the pansy in the first instance. The best way to have a good stock in the spring, is to plant out largely in September, in raised beds, plenty of well-rooted cuttings, a foot between each plant, or even eight inches will do. At the outset of hard frost, cover the beds with pea-stakes (beech-branches I have found best), rather thickly than otherwise. In the spring, if this plan is properly carried out, there will be a plentiful stock for all purposes. This answers capitally for the general stock; but for new and rare varieties a little more care is requisite. For instance, should we at the end of autumn have only one plant of a new variety, it should be carefully taken up, divided, and the divided parts planted, round the edges of a well-drained six-inch pot, in a soil of loam and a little leaf-mould. Let such store-pots be placed in a cold frame, the top kept on, and slightly shaded, till the plants have drawn root. Then the rules should be—complete exposure to the weather, except in heavy rain or severe frost; a single mat, in the latter, is all that is necessary. If any additional covering is ever required, it is when thaw comes, to prevent a too quick melting of the frozen soil. This constitutes the principal danger, for, although the plants and pots are frozen through, no harm will result if they are only thawed slowly enough. As amateurs, we must be conscious of frequently killing our best flowers with too much kindness. Hence, as a rule, all undue "coddling" is bad for hardy plants. Wherefore should pansies be subjected to greenhouse treatment? a plant descended from the hardy congener of the mountains of the far North. Or the auricula? a native of the Swiss Alps. In their mountain homes they have, no doubt, a good covering of snow to protect them from the frost during the winter months. Let us, as far as possible, imitate Nature, and keep up, by moderate protection, a good sturdy habit, by giving plenty of air and not being too much afraid of the cold. During winter, store-pots should have very little water, unless the plants show a tendency to flag. The more dormant they are kept during the sunless season, the better.

When they begin to grow, it will be necessary to water, but be sure the moisture is well dried before shutting-up time, as in spring, frosts come so suddenly that the lights require to be closed

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at night. If the plants are shut up damp, mildew is sure to appear, and nothing destroys pot plants more. Beech branches for out of door protection for pansies and polyanthuses, are excellent. They permit a plentiful admission of air, at the same time that they defend from severe frost. These branches should not be removed till the middle of April, at the earliest., Frost does more harm to pansies after they begin to grow than all the winter through. How often, in former times, on a fine, sunny spring day, have we walked round our pansy beds, and marked with satisfaction the fine healthy growth and the promise of bloom, which the genial sunshine would bring to perfection at no very long period: but the very next morning, after a night of biting black frost, which so often follows a bright day in April, how changed was "the spirit of our dream." Alas! our sturdy friends, after an hour's sunshine, looked very much as if they had been boiled; prostrate and drooping, their vigour was for ever gone. Plants in this plight send up side-shoots, but the bloom from these is never so fine. The top bloom on the growth that has withstood the winter blast, if not too coarse, is always the finest. However, the blooms that follow are sure to be good, if not frosted or blown about.

Many persons experience a difficulty in growing pansies (outside, in beds) at all, as the wire-worm, slugs, etc., clear off their plants in a very short space of time. The difficulty appears to be quite imaginary, as, with proper attention, pansies may be grown on the same piece of ground for years. The whole secret lies in the preparation of the beds. No manure of any description must be used, as this is a fertile cause of failure.

If you have the choice of a space for your pansy garden, a rather shady situation is to be recommended; by no means, however, near the drip of trees. Beds four feet across, and as long as there is room for, are most convenient. An edging of thin boards for the sides and ends gives a nice finish, and enables the florist to top-dress the beds without having the alleys between covered with soil. By raising the centre of the beds, and sloping them towards the edges, we give heavy rain a chance of running off into the alleys, and thereby get quit of too much moisture. Mr. Charles Turner, than whom there is no more eminent authority, was the first, as far as I am aware, to recommend raised beds for the cultivation of the pansy and pink. Good maiden loam, with a slight admixture of leaf-mould, is the best compost both for pot plants and those out of doors. The top spit of the beds should be removed every autumn, and a similar quantity of well-rotted turves and leaf-mould brought to replace what has been taken away. This compost, after having been spread over the allotted space

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should have a sprinkling of soot and lime in the process of digging in, and, after levelling, the beds are ready for the plants. Choose a dull day in the end of September or beginning of October for planting, and when cold weather sets in, protect as directed. In the middle or end of April, the unsightly covering may be removed, the soil stirred, and the beds top-dressed. At the same time commence a timely attack upon slugs, wire-worms, etc., so that neither blooms nor plants may suffer from their ravages. During May and June the beds will be very attractive, and will repay any little attention that has been bestowed upon them.

For exhibition purposes, pot culture is at present the mode in fashion. There is a refinement and delicacy in blooms from pots that completely destroys the chance of those grown out of doors. No doubt very fine blooms are obtained from plants grown out of doors in fine weather, but for the last few years, at the Scottish Pansy Society's competition, in the first week in June, the successful blooms were all from pot plants; blooms from the open ground had no chance with the refinement and purity of colour of those from pots. Then why, it may be asked, grow pansies in beds at all? The answer is simply this. That, although there is nothing in the world more calculated to try the merits and improve the breed of a florist's flower than a good competition, still I am not aware that many persons would allow that pot collections of florists' flowers, with their shades, etc., etc., contribute very much to the general effect of a flower-garden, which the pansy beds most unquestionably do. The treatment that pot plants also receive, the constitution of the plants, as a general rule, is not improved, so that a good collection in beds is best to propagate from. Pot plants do not seed so freely as those out of doors, and hence arises another reason for an out of door collection.

For exhibition purposes, plants that have been in store-pots all the winter should be transferred to their blooming-pots early in March. Six or eight-inch pots are best, and a similar compost to that already recommended is in every way suitable. Two plants may be placed in an eight-inch pot, but a good deal depends upon the size of the plant. In Scotland the plants for potting are generally raised from early-struck cuttings in spring, which are planted out in June and transferred to store-pots in the autumn. These are good-sized plants at the potting season, and soon fill an eight-inch pot with roots. The whole secret is to grow them sturdy, without drawing, by keeping the lights off them altogether in fine weather, and plenty of air at all times, free from green-fly and slugs; and finally, three weeks before the exhibition, the lights must be kept pretty constantly on, giving plenty of air and shade a few days previous to the competition.

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Seedling raising I have reserved to the last. This is, perhaps, the most interesting of all things connected with pansy-growing; and, although many persons are engaged in doing their best, how few really fine flowers does a new season disclose. The truth is, seed sown from an ordinary good collection, without skilful hybridizing, in general, produces flowers no better than the parents, and often worse. Still, with care, a great deal has been done and remains still to be done. Judicious crossing is necessary, but this is a simple affair in the pansy, as all that it requires is to remove the under petal of the flower to be operated on. Examine with a lens the pistil of the flower to see that there is no pollen adhering. If the hollow summit of the pistil shows a viscid moisture, it is then in the most favourable state for having the pollen from the flower with which you wish to cross it applied. Remove the under petal of this flower, and examine the groove or furrow at the narrow part where it is attached, and, if in a proper state, you will see the pollen filling this groove. All that requires to be now done, is to apply the groove charged with the pollen to the summit of the pistil, and observe with your lens that a good dusting has been given. In a few days you will soon see if your crossing has been successful, as the seed-pod begins to swell; and by tying a piece of coloured worsted round the flower-stalk, you easily mark it as a hybridized pod, and can take a note of the cross. This is rather difficult to describe in words, but is the simplest affair possible. Of course, bright sunshine is essential to success, as also a proper state of the pollen and pistil, which a little experience will soon give the necessary knowledge.

Seed saved up to the 15th of September had better be sown, as soon as ripe, in pans, and kept in cold frames through the winter. Seed saved after that period, and the quantity may be considerable, had better be reserved and sown outside in the following June, and the seedlings will flower in the cool of the autumn.

In conclusion, I shall name six first-class flowers in each section, and recommend them to seed from.

Selfs.—Dark: Alexander M'Nab, Charles M'Intosh, Mr. J. White, Mr. T. Graham, Nepaulese Chief, Indian Chief.

Light: Yellow Model, Royal White.

Yellow Grounds: Mrs. Hope, Mrs. Downie, Duchess of Wellington, C. W. R. Ramsay, Blink Bonny, Marquis of Beaumont.

White Grounds: Mrs. Laird, Lady Susan, Countess of Rosslyn, Mary, Royal Standard, Colonel Wyndham.

Berwickshire. C. S.

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MY SMALL GREENHOUSE.

I HAVE no doubt, Mr. Conductor, that there are, besides myself, a great number of lady subscribers to the "Midland Florist," and I think when the weaker sex (as you lords (?) of creation frequently style us) do take an interest in the cultivation of any flower, we really do excel. I know gentlemen in general, and some gentlemen in particular, are quite averse to the development of a love of authorship in ladies; blue-stockings are quite at a discount, yet why it should be so I don't know. Who among gardeners and the adviser of the amateur was more famous than the late Mrs. Loudon? and I cannot see why other ladies may not turn their attention to this part of the matter. I don't mean to say that any of us will become Mrs. Loudons, but, at the same time, I cannot see why all the instruction we derive should be from practical gardeners and amateur florists. My greenhouse is only a small one, and I therefore am able to take the entire management myself. I think that a lady's experience, although small, may be practically useful to amateur gardeners. I have now had my greenhouse for three years, during this time I have experienced many disappointments and learned several important lessons.

At the present time I have a fair quantity of flowers. Primulas are with me exceedingly fine this season. I sowed my seed last March, and pricked off the plants around the edge of a pot; here they remained until the leaves touched each other, and then they were repotted singly into pots. These should not be too large, for I find that the smaller the pots (the roots of the plants being allowed moderate room), the better the colour and the neater the habit. They require plenty of air and abundant drainage. Last week, I went into a neighbour's, and found that their primulas were all damping off, owing to the water being poured indiscriminately on leaves and flowers. Unless great care is taken in the watering, the plants will be pretty certain to shank and rot; a dry atmosphere is certainly most favourable.

My cinerarias are just commencing blooming, though, I confess, they are earlier than usual. My bulbs, too, are all fine this season. Hyacinths, early tulips, and lilies of the valley, have been, and are still very beautiful; indeed, without spring bulbs, my greenhouse would be devoid of its greatest charm. I have a succession of bulbs still to bloom. These have been kept, until a fortnight ago, in a little cold frame I have outside, well protected from frost and cold. Then there are the acacias, a beautiful tribe of plants: armata is my favourite. There are, however, many

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other varieties perhaps equally beautiful. The flowers of all the varieties I have are yellow—little balls of flowers thickly set among dark-green leaves. The soil most favourable to their growth is good fibry peat, and they succeed admirably with simple greenhouse culture, allowing them to rest in summer and autumn. Frost, however, is extremely fatal.

My camellias are still very beautiful; some I purchased last year are only small plants, yet they have borne, on an average, fifteen blooms each. Many persons are complaining that their plants will not bloom, that the buds fall off. This is frequently done by over kindness—the regular watering system. Some persons think the right way to keep the plant in health is to water regularly, but, depend upon it, half the failures are through so much of the *regular* system. I have only two epacris, but these are both of them coming out very nicely, as are also a few azaleas. When these are over they must be pruned, otherwise they get too large for me. Cyclamens are also coming out. These are, I think, less grown than ever, for I but seldom see them now. I was induced to grow them myself from some remark in the "Midland Florist" about two years ago, and have quite a collection raised from seed. Daphnes are favourites with me, on account of their delicious scent. I have only two varieties, and only one plant of each—indica and odorata—yet they quite perfume my little house. They are potted off in loam and turf, and not allowed too much water in autumn and winter. Hovea celsii is just beginning to bloom, as also are several specimens of abutilon striatum, trained in a trellis at the back of my house.

I have, I think, described the most interesting of my favourites just now, and intend to continue to do so from month to month. I would not, however, advise that fires be kept up too strong. Forcing plants in the night is a practice to be condemned. Give plenty of air on all favourable opportunities. Plants grown at night are unnatural. I grant that they may require fire-heat, but give as little as possible, and this little in the daytime, except when very severe. So that the thermometer never is lower than 34° I do not care. ELLEN G——.

Greenhouse Cottage, Retford.

[Whoever may plead objections to lady authors, we cannot. We are obliged for these experiences, which will, we believe, be read with interest by many subscribers. The want of information for the management of small greenhouses is often expressed, and we hope our correspondent will kindly continue her favours. She is, however, mistaken in thinking, as we believe she does, from her letter accompanying the communication, that she is the first

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lady correspondent given to the writing of articles. May their number increase, say we.]

A LITTLE CHAT ABOUT FRUIT.

How little attention is paid by amateurs to the raising of new fruits, yet the extraordinary interest in the cultivation which has been excited in the last few years, certainly demands that a greater amount of attention be paid to the production of new varieties. The present age is one of scientific inquiry, and it is yet to be determined how much dependence may be placed on the working of the process of hybridization with fruits. An uncertainty always hangs over a raiser of new fruits, is a complaint urged frequently; yet not any more uncertainty than in the raising of florists' flowers—nay, not so much, for the one has been less tried, and therefore the greater results may be reaped. The art of crossing flowers for the production of finer varieties is daily practised. New vegetables are frequently introduced, and yet the demand for improved varieties of fruit is quite as great. Every new and good thing is seized on with avidity, and the raiser finds an ample market for a really good production.

How are we to raise seed from fruit trees? A celebrated pomologist and botanist, Van Mors, lived in Belgium some seventy years ago, and he wrote no inconsiderable number of treatises, among which are several on the raising of fruit trees. Now, this Van Mors, after some years spent in experiments, found that to improve the nature of the various fruits, it was necessary to grow them in a cultivated soil, to sow seed, and to gradually improve the race; and he came to the conclusion that all seeds in a state of nature can be made to be greatly improved by cultivation, but that when improved, and seed sown from these improved varieties, they would again degenerate. To me, however, a much easier plan than that of Van Mors presents itself, and I would advise amateurs to work for new varieties exactly the same as they would in working for new varieties of any flower, the results will be the same. A nice adjustment of the qualities of two fruits in particular, would frequently be highly desirable. The selection of parents suited for adaptation to each other, is as much a matter of fact as the selection of proper stock for the improvement of the breed of cattle. The results are equally sure; granted, that by *chance* good fruits are frequently raised by chance; of course, I mean that one variety is impregnated with another, and that the result is sometimes a favourable union. The question, however, is one worthy of attention. The anthers

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from the blossom on which you wish to operate, must be carefully removed, so that the stigma shall not receive any portion of the pollen, or fertilizer, of its own flower. Pollen must be, however, procured from another flower of the variety with which you wish to cross, and so artificially impregnate the blossom. The results of the sowing of seed produced by the conjunction of these two, will be a development of the qualities of both parents. As it is with fruit, so with vegetables; improvements are to be made, and only, I believe, by cross breeding, or hybridization. Of course, no man can determine how much of one parent may be developed in the other, still, that both parents will exist in the progeny is certain; and I find, from long experience, that the progeny of these again will frequently develop the combination of the two parents more strongly than the first production. Science in horticulture is not sufficiently considered, and when the production of fruits is properly carried out on scientific principles, I believe we shall arrive at quite as certain results as does the breeder of horses or cattle. At this season of the year, when orchard-houses are so abundant, would it not be worth while to pay a little more attention to this subject? AN HORTICULTURIST.

Frome.

SELECT LISTS OF TULIPS.

From the REV. S. CRESWELL, *Radford Vicarage.*

IT gives me much pleasure to furnish your subscribers to the "Midland Florist" with a select list of the best tulips I had the gratification of seeing last year. They are first-class flowers, very pure, good markers, and generally constant, and hope no one will be disappointed with my selection. There are, no doubt, many other equally fine sorts which have not yet come under my observation. Yours sincerely, SAMUEL CRESWELL.

Roses.—Napoleon, fea.; Mary Lamb, fea.; Rose of England, fl., seedling; Mrs. Neilson, fea., seedling; Agnes Creswell, fea., seedling; Sarah Headley, fea., seedling; Cerise primo, superb, fea. and fl.; Vicar of Radford, fea. and fl.; Fleur de Marie, fl.; Miss Eliza Seymour, fl., seedling; Kate Connor, fea.; Lady Catherine Gordon, fl.; Duchess of Sutherland, fea., (Gibbons's); Miss Edgeworth, fl.; Bacchante, fea. Bacchus; Miss O'Niell; Duchess of Rutland, fl.; Lady Douro, fea.; Rebecca, fea., seedling; Aglaia, fea. and fl.

Byblœmens.—Duchess of Sutherland, fl.; Adonis, fea., seedling; Gem of Gems, fea., seedling; Mrs. Creswell, fea. and fl.,

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seedling; Cherub, fl., seedling; Chieftain, fea., seedling; Coupe de Hébé, fea.; Thalia, fl.; Queen of the South, fea., seedling; Angelina, fea., seedling; St. John, fl., seedling; Miss Groom, fea., seedling; Blœmart, fl.; Salvator Rosa, fea. and fl. (Brown's); Byzantium, fea.; Gem, fea. (Abbott's); Kirke White, fl.; First-rate, fea. and fl.; Sarah Ann, fl. (Allen's); Princess Royal, fl.; Maid of Orleans, fea. and fl.

Bizarres.—George Hayward, fea.; Sir Colin Campbell, fea., seedling; Sphynx, fea.; King, fl. (Strong's); King, fea. and fl. (Willison's); President, fl.; Henry Groom, fl.; Everard, fl.; Merit, fl.; Admiral Dundas, fea.; Sir J. Paxton, fea. and fl.; Rear Admiral, fl., seedling; Marquis of Bristol, fea. and fl.; Albion, fl. (best fl. sort of Polyphemus, quite pure); Masterpiece, fea.; Dr. Horner, fea.; Augustus, fl.; Pilot, fl.; Charles Brown, fea.; Sovereign, fea.; Elizabeth, fea.

From Mr. Thomas Allesbree, *Draycott, near Derby.*

Roses.—Heroine; Aglaia; Aglaia, fl.; Bion; Kate Connor; Napoleon; Gibbons' No. 1; Lady Stanley; Joan of Arc; Lac; Catalani; Lady Catherine Gordon.

Byblœmens.—Purity; Gem; Victoria Regina; King Robert Bruce; Mrs. Lymberry; Maid of Orleans; Salvator Rosa (Brown's); Kirke White; Lorenzo; Pandora; Duchess of Sutherland; Thalia.

Bizarres.—Sphynx; Sovereign; King (Willison's); Saxon; George Hayward; Sir Joseph Paxton; Merit; Henry Groom; Rear Admiral; Everard; Eldorado; Alfred the Great.

From Joseph Hunt, Esq., *High Wycombe.*

I feel much pleasure in complying with your request, and herewith forward you a list of the best thirty-six varieties which I have known or grown myself. J. Hunt.

Roses.—Cerise Belle forme; Duchess of Sutherland (Groom's); Heroine; Rose Lac; Triomphe Royale; Lady Catherine Gordon; Sarah Headley; Victor Emmanuel; Camuse de Croix; Crook's Mary; Claudiana; Arlette.

Byblœmens.—Adonis (Headley's); Blœmart; Godet Parfait; Thalia; Musidora; Pandora; Queen of the South (Hunt's); Salvator Rosa (Brown's); Violet Brun; Queen Charlotte; Eliza (Hunt's); Duchess of Sutherland (Walker).

Bizarres.—Colbert (Slater's); Everard; George Hayward; Magnum bonum; Royal Sovereign; Surpasse Catafalque; King (Willison's); Vivid; King (Strong's); Pilot; Selim; Charles Brown.

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CINERARIAS.

THOSE who attended the exhibitions round London ten years ago cannot fail to be struck with the great advance which has been made in this flower since that time. This improvement is not limited to the form, or varied and beautiful colours, but is alike discernable in the habit and freedom of bloom; in short, every form of improvement may be observed. I need hardly say that this is attributable to unwearying exertion and successful hybridization. What was once a complete star, is beautifully round, and very much resembling the true form of the polyanthus given in the February number of the "Midland Florist." Those in cultivation ten years ago would be quite as much condemned (so far as first-rate properties go) now, as must the other form of polyanthus (I mean the one to the right, given last month), and which I hope never to see realized. To produce the masses of varied and brilliant colours which are to be seen at the May show in the Regent's Park, is a work of no ordinary care and attention, although it creates many enthusiastic admirers for the flower—and well it may. It is not, however, my intention here of going into the mode of cultivation, but simply to give a list of such as are deserving the attention of any who may be desirous of growing them for specimens another season, or who may have an idea of raising seedlings. I would strongly urge upon amateurs this interesting amusement. There is a great chance of success, and there is plenty of room for improvement, even yet, in this class of plants. We want a fine rich blue, a good scarlet, and a good white; in fact, we want good selfs of all shades, and this can only be done, in a great measure, by hybridizing. The following twelve sorts are the best which have come under my notice up to the present time:—

**Acme* (Turner).—This variety is of excellent form and habit. It has a light disc, warm rosy purple edging, and white ring.

**Brilliant* (Smith).—This is, perhaps, the most distinct variety seen last season. The colour is intense rich crimson, self, of good shape, and very free; it is of good habit, and is indispensable in any collection.

**Baroness Rothschild* (Turner).—Rosy purple margin, with large white ring; firm form and of good habit. It is an excellent grower, and produces a fine head of bloom.

Editor (Dobson).—A novel and pleasing kind, being a pure white, with a broad margin of amethyst, has a dark disc; the petals are very stiff and of fine quality. It is of good habit, and very free bloomer.

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**Governor General* (Dobson).—Large, bright crimson self, having very large, bold flowers, wide petals, and free from serration. The shape is good, and tolerably good habit. The best crimson self.

**Incomparable* (Turner).—Fine deep crimson carmine, with a white ring, and small dark disk. It is a very free flowering, dwarf habit.

**Lady Seymour* (Turner).—Deep blue, with a narrow white ring, and dark disk. Very attractive, of good habit.

Lord Palmerston (Turner).—A deep purple self, of good shape and habit. A distinct variety; early.

Mrs. Hoyle (Turner).—A pure white ground with bright rosy crimson edges, small disk; an excellent grower, of strong habit. The flowers are of fine shape and quality. It is also an excellent bloomer.

Mr. Livingstone (Smith).—Lively purple, with a white ring and dark disk. Very distinct and attractive.

**Slough Rival* (Turner).—A large and fine flower, dark violet-purple with a white ring, and a small purple disk. Fine form and habit.

Those marked * were sent out in October, 1859. In addition to the above, the following are also very good:—

Belissima (Turner).—White, with blue edge.

Attraction (Dobson).—Violet-crimson, yellow disk.

Imperial Prince (Dobson).—Pure white, bright crimson margin.

Picturata (Henderson).—Rosy violet, white centre; fine.

Sir Charles Napier (Turner).—Intense blue self, very free bloomer.

JOHN DOBSON.

Woodlands Nursery, Isleworth.

ROSES ON MANETTI.

HAVING read the Manetti controversy, now so warmly carried on in different publications, and having received several letters on the subject, I am induced, with good feelings towards those who may differ from me, to say a few words on the subject of the proper treatment of roses on the stock of Manetti. Let me first, however, say, that in proper rose soils, when the briar is good, it is the most manageable and best stock in the world. Such is Mr. Paul's land, and the briar roses from that fine establishment are excellent. There is, moreover, I am told, a stream of water running through the nursery. Under such favourable circumstances it is no wonder

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that Mr. Paul should prefer briar roses; but we are not all so blessed. We must, therefore, use such a stock as is suited to our inferior circumstances; for light but highly cultivated soils, on the whole, I think, Manetti roses are best. There is, however, no doubt that roses are fickle things, even on stocks that suit them, and that roses which will do nothing on one stock will do very well on another. Some do equally well on both, viz.:—Cambaceres, Jules Margottin, Louis Odier, William Griffiths, Caroline de Sansal, Baronne Prevost, Marx, Alexandrine Bachmeteff, Gloire de Dijon, Madame Vidot (most perfect of all), Souvenir de la Reine d'Angleterre, Triomphe de l'Exposition, and Mathurin Regnier; these, therefore, are the most valuable roses. Others here will only do well on Manetti, viz.:—Louise Peyronny, Duchesse d'Orleans, Comte de Nanteuil, Le Lion des Combats, Victoria, Madame Laffay, La Ville de St. Denis, White Bath (usually dwarf and weak, but on Manetti I have six plants as strong as Laneii), General Simpson, and Madame Place. I have enumerated in the January number of the "Scottish Gardener," fifty-one roses that bloomed splendidly last year on Manetti stocks. Two amateurs that saw them in bloom have, within a few days, seen the plants, and pronounced them to be in most beautiful condition. They were, however, much mildewed, and more so than the briar roses, which also, I think, look well, especially the summer roses, and which, without exception, bloomed beautifully on the briar, and made excellent wood. They have more time to make wood than autumnals, and their flower exhaustion is sooner over. It is of little use sending roses on either stocks to "Tailors." The briar and Manetti are often both blamed for faults not their own. One of the reasons of the failure on either stock is an improper use of the knife; go into ninety-seven roseries out of every hundred and you will see all the roses cut alike. Leaving out pole and pillar roses, as a general rule, you can scarcely cut briar roses too hard, and Manetti roses too sparingly, their wood being more succulent and less first-class than briar roses. Roses on Manetti want more wood instead of less, to carry off the succulence of the Manetti stock. Some die, though excellent before, when cut hard, by stopping back on the stock its rising and redundant sap. The rose wood left will then turn yellow or blood red, and the tree will die or do nothing. I cut two Lord Raglan's, Paul Ricaut, established Rebecca, to three or four eyes, and they never broke at all, but died. As a general rule robust roses do best on the Manetti; there is, however, no rule without an exception. The failure of Manetti roses is sometimes to be attributed to the propagator, who buds it so high that we hardly like to bury it over the point of the union, which is essential to its prosperity.

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Another cause of failure on the Manetti stock is sending them out before the wood is ripe. The chief faults, no doubt, lie with the cultivator, who cuts the plant of Manetti roses too early in the spring, plants it in soil not half good enough to sustain its immense demand, prunes it too severely, or improperly plants it.

Mismanagement, in one word, is the reason why Manetti roses fail, and not necessity. My poor people have grown Manetti roses, Mrs. Elliott and Baronne Prevost, given to them by me, and planted by myself, for two years, and never did I see finer or more abundant blooms than I saw this year. Their ground is stronger than mine, and, be it observed, they never put a knife near them. Mrs. Elliott is a fine thick bush, from four to five feet high, supported by a stick, for it is too heavy to stand by itself. In strong land, in which I perceive the Manetti stock grows stout enough for standards, I see no result but pole roses. In such a case they must be cut like hybrid China or hybrid Bourbons, and must be fed as highly, and supported with poles or suitable stakes. I have bought a four-year-old Manetti, Duchess of Norfolk, with wood as thick as a man's thumb. I bought it of Mr. Gill, of Blandford, whose land is excellent, who planted it out against his wall (west aspect), a very small weak plant, four years ago, and never gave it food or water during that time. Its beautiful volumes of roses last year caused me to buy it. It is now thinned out and left five feet high, to bloom against my north wall to the glory of Mr. Wood. It is the best doer of all on Manetti, it never mildews or rusts. I have fifteen plants of it, and the immense volumes of roses, with beautiful wood and foliage, gladdened me last year, without a moment's cessation, till the frost cut off many final buds. Mr. J. Milne, of Hull, saw the roses here last year. He is, I am happy to say, coming again this year (a seven hundred miles' trip), and he will be able, and at my request shall tell you whether the roses on Manetti are failures or not. There is one thing, I must observe, which applies to roses on any stock, viz., that if they bloom inordinately in any one series or year, they do not usually do so well the next. The difference between briar and Manetti roses, as regards series, is this—the briar rose usually rests between the series, the Manetti rose, under proper culture, is never out of bloom at all. Last year, before the first crop was off, the second was on. This, however, cannot be produced or maintained but by the highest cultivation and abundant watering. In a word, roses and strawberries, the two chief and almost only things to which I devote my observation, and such time as I can, consistently with the performance of higher duties, spare, "live like fighting-cocks." I have just had a letter from Mr. G. Pentland, the raiser of George Peabody, who says that on

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Manetti "Lord Raglan grows rapidly, but does not bloom more than once, and that the Americans, like all roses, do best on their own roots." I wish it would grow more freely on either stock here. As to continuity of blooming it is nearly as good as its parent, and its blooms are always perfect.

Finally, be it understood that I have only had two years' experience in Manetti roses, and therefore I hope that what I have said will not be misconstrued into longer experience. I am quite a lover of the briar, and have planted two hundred good rooted and healthy ones to bud on. Were the briar roses sent out always as good as the Manetti, roses on the briar would have more friends; but this is far from the case. I hope that these few words may do good, and that Rosarians will cease from attributing to each other corrupt motives in the free expression of their opinions.

Rushton Rectory, Feb. 15, 1860. W. F. RADCLIFFE.

P.S. We are indebted to the Manetti, at least, for our pot novelties. Since writing the above, I have received a letter from Mr. John Cranston, of the Rose Nurseries, King's Acre, near Hereford. He says, "I am glad to find that you are still a friend to our poor Manetti. No plant, I think, has ever had more enemies than this ever since it was introduced, and yet how great has been the demand for it, and how very extensively it has been cultivated. I could have sold this season 100,000 to the trade for working, if I had had them; a pretty good proof that it must do well somewhere. The great mistake, however, is, that its culture has not been properly understood, nor the soils most suitable for it."

DAHLIAS.

From MR. E. MORLEY, *Brampton, near Chesterfield.*

Orange Class.—Chairman, Perfection, Cherub, Charles Waters, Lady Franklin, Sir John Franklin, Duke of Wellington, Lollipop, Admiral Dundas, General Fanshawe.

Crimson Class.—Colonel Wyndham, King, Sir F. Bathurst, Triomphe de Pecq, Incomparable, Captain Ingram.

Dark Crimson Class.—Commander, Standard Bearer, Summit of Perfection, Lord Bath.

Yellow Class.—Goldfinder, Louisa Glenny, Golden Drop, George Glenny, Ada, Sir Joseph Paxton.

White Class.—Mrs. Charlesworth, Miss Caroline, Alice Downie, Venus, Fanny Dodds.

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Scarlet Class.—Lord Palmerston, Scarlet King, Emperor, Mentor, Edward, Dazzle.

Purple Class.—Touchstone, Agincourt, Lord Fielding.

Peach, Lilac, or Rose.—Mrs. Edwards, Rachel Rawlings, Lilac King, Empress, Princess, Elizabeth, Admiral, Fearless.

Edged Class.—Lady Popham, Hon. Mrs. Trotter, Doctor Gully, Amazon, Mrs. Pressley, Beauty of Slough, Mrs. Church, Fanny Keynes.

Fancy Class.—Charles Perry, Conqueror, Inimitable, Duchess of Kent, Carnation, Oliver Twist, Enchantress, Beauty of High Cross, Mrs. Hansard, Miss Frampton, Gloire de Kain, Baron Alderson.

From Mr. W. Port, *Iffley.*

The following list is made from personal notes of the leading exhibitions which I attended, either in the capacity of censor or otherwise, and may be considered as the best varieties in cultivation.—W. Port.

Selfs.—Lord Palmerston, Miss Pressley, Mrs. Church, Mentor, Midnight, Chairman, Cherub, Benjamin Disraeli, Colonel Wyndham, Commander, Hon. Mrs. Trotter, Golden Drop, Goldfinder, Lady Popham, Lady Franklin, John Dory, Lord Eversley, Mrs. Charles Waters, Pioneer, Rosebud, Touchstone, Pandora, Perfection, and Triomphe de Pecq.

Fancies.—Oliver Twist, Carnation, Charles Perry, Duchess of Kent, Mrs. Hansard, Baron Alderson, The Flirt, Comus, Mrs. Kean, Marc Antony.

ROSES.

It has been the usual practice by those who furnish selections of roses, to give a list of the best kinds without any distinction as to how they are to be grown, and it not unfrequently happens that an amateur will choose all the varieties selected for his choice, to fulfil the purpose required; the consequence is, that dwarf-growing, or otherwise unsuitable kinds (although, perhaps, first-class roses), are fixed upon to be grown as standards, and again, vigorous growers for half standards or dwarf standards. The evil, however, soon becomes apparent—the standards, where not suitable for the height of the stock, will not grow, and the dwarf standards, having vigorous varieties upon them, become too luxuriant.

To obviate this disappointment, I have endeavoured, in making

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the undermentioned selection, to choose for full standards all the varieties suitable for that purpose, and the same for half standards and dwarf standards, and I think the whole selection will be found to contain nearly all the choice varieties which would be required for a small collection.

TWENTY-FOUR BEST ROSES TO BE GROWN AS STANDARDS.

Summer Roses.—M. Gloire des Mosseuses, pale rose, outer petals whitish; M. Laneii, deep brilliant rose; F. Boule de Nanteuil, crimson purple; F. Kean, or Shakspeare, rich velvety crimson; H. C. Chénédollé, brilliant glowing crimson; H. B. Charles Lawson, bright rose, shaded; H. B. Coupe de Hébé, delicate fresh rose.

Autumnal Roses.—P. M. Madame Edouard Ory, reddish crimson; H. P. Alexandrine Bachmeteff, deep brilliant rose; H. P. Baronne Prévost, brilliant rose; H. P. Caroline de Sansal, pale flesh; H. P. Duchess of Sutherland, bright glossy pink; H. P. Général Jacqueminot, brilliant scarlet-crimson; H. P. Jules Margottin, brilliant glossy pink; H. P. Lord Raglan, deep crimson; H. P. Madame de Cambacérès, brilliant deep rose; H. P. Monsieur de Montigny, brilliant rose; H. P. Souvenir de Leveson Gower, brilliant deep red; H. P. Souvenir de la Reine d'Angleterre, brilliant rosy pink; H. P. William Griffith, glossy pink, changing to light satin rose; H. P. Souvenir de la Malmaison, blush centre, clear flesh; T. Gloire de Dijon, buff, with orange centre; T. Leveson Gower, salmon buff; T. Madame Damaifin, buff, with salmon tint, outer petals cream; N. Solfaterre, fine sulphur yellow.

HALF STANDARD ROSES.

Summer Roses.—M. White Bath, paper white.

Autumnal Roses.—H. P. Anna de Diesbach, brilliant rose; H. P. Armide, brilliant rosy pink, outer petals paler; H. P. Baronne Hallez, dark red, sometimes deep crimson; H. P. Cardinal Patrizzi, rich dark velvety crimson; H. P. Duchess of Norfolk, vivid crimson; H. P. Evêque de Nîmes, most brilliant scarlet crimson; H. P. Gloire de Lyons, rich deep plum and velvety crimson; H. P. Le Mont Vesuve, intense deep velvety crimson and purple; H. P. Lœlia, satin rose; H. P. Louis Choix, brilliant crimson; H. P. Madame Vidot, the palest flesh; H. P. Monsieur Raval, rich velvety scarlet, or light crimson; H. P. Mrs. Rivers, satin flesh; H. P. Pauline Lansezeur, violet red, changing to deep rose; H. P. Prince Léon, light rosy crimson; H. P. Souvenir de

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Beranger, pale rosy pink, with fine lilac shade; T. Devoniensis, creamy white, centre sometimes blush; T. Louise de Savoie, clear pale yellow; T. Madame Maurin, cream and fawn; T. Madame Willermoz, creamy white, centre tinted with fawn; T. Soubreuil, pale straw; T. Souvenir d'un Ami, salmon and rose; N. Triomphe de Rennes, straw, centre pale yellow. P. M. Marie de Bourgogne, deep rose; D. P. Bernard, bright salmon pink; H. P. Alphonse Karr, soft rosy pink; H. P. Bouquet de Marie, white, centre pink; H. P. Colonel de Rougemont, deep glossy rose; H. P. Général Negrier, pale rose; H. P. Mademoiselle Thérèse Appert, pale satin, centre delicate peach; H. P. Maria Portemer, reddish velvety plum; H. P. Paul Dupuy, deep crimson, slightly mottled with velvety purple; H. P. Rebecca, deep crimson, mottled with rich purple; H. P. Thomas Rivers, brilliant rosy pink, outer petals pale rose; H. P. Toujours fleuri, bright crimson; H. P. Victor Trouillard, deep rich crimson suffused with purplish crimson; H. P. Virginal, pearly white, with the palest flesh tint in the centre; B. Aurore du Guide, light crimson and violet; B. Docteur Leprestre, deep vivid crimson; B. Docteur Berthet, deep reddish purple; B. Jaustine, brilliant pink; B. La Quintinie, velvety crimson and purple; B. Madame Angelina, cream; B. Prince Albert, violet crimson; T. Adam, flesh, centre salmon and fawn; T. Madame Bravy, cream, centre blush; T. Narcisse, fine pale yellow.

TWELVE BEST ROSES FOR PILLARS.

H. C. Chénédollé, brilliant glowing crimson; H. C. Triomphe de Bayeaux, creamy white; H. B. Coupe d'Hébé, delicate fresh rose; H. P. Souvenir de la Reine d'Angleterre, brilliant rosy pink; B. Acidalie, white, in dry weather beautifully tinted; B. Apolline, light pink; B. Bouquet de Flore, rosy carmine; B. Sir Joseph Paxton, bright rose; N. Fellenberg, bright rosy crimson; N. Jeanne d'Arc, pure white; N. La Biche, white, centre flesh; N. Ophirie, bright salmon and fawn.

EIGHT BEST ROSES FOR WALLS.

T. Devoniensis, creamy white, centre sometimes flesh; T. Gloire de Dijon, buff, with orange centre; T. Louise de Savoie, clear pale yellow; T. Yellow, pale yellow; N. Cloth of Gold, pure yellow; N. Isabella Grey, pure deep yellow; N. Lamarque, sulphur white; N. Solfaterre, fine sulphur yellow.

JOHN CRANSTON.

Nurseries, King's Acre, near Hereford.

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SEASONABLE ADVICE.

From the numerous advertisements of annual flower-seeds, we may presume there are vast numbers of buyers; and when the beauty of this extensive tribe is considered we cannot wonder this should be the case. To depreciate annuals would indeed be a tasteless and a hopeless task, since they are worthy the best treatment, and are of such essential service in most gardens. My object will be rather to direct and regulate, and not to discourage, the growth of annuals. I shall, therefore, make some general remarks on annuals themselves, and then lay down a few rules for their successful culture.

In gardens of great extent there is a capacity for growing almost everything to advantage. Some plants are attractive anywhere, others make the best appearance in situations where a close inspection is possible, but many are not fit for confined situations, and when they are admired it is confessed that "distance gives enchantment to the view." The common sunflower is ungainly and awkward in a little suburban garden, but it tells well in a plantation, or when it can be seen afar off. The same may be said of the orange Erysimum, its colour renders it invaluable when grown in clumps, for general effect; but how miserable it looks when found in a small mixed flower-bed! In growing annuals, therefore, their size and habits should be diligently studied, as well as the extent of the garden which they are intended to adorn. If this rule is neglected amateurs will be disappointed when they purchase seeds, which may have been justly commended. When grown, and in flower, it may be true that they are individually beautiful, but they may not be in keeping with objects around them. Great care should, therefore, be used in selection, if the time and money of the amateur are not to be wasted. For small gardens shrubby and compact greenhouse plants, which do well in the open ground in our summers, are much to be preferred to many annuals. Pelargoniums, fuchsias, calceolarias, verbenas, petunias, etc., may be preserved with ease through the winter, and by careful management, may be turned out in May and June in a blooming condition. Every observer of gardens must see the vast superiority in point of beauty and finish which these exotics possess over most annuals. If, then, you are limited for room, select only those annual flowers which grow compactly, and which continue long in bloom. The mesembryanthemums are admirable in these respects, but they require more sun than we generally get in England. However, I cannot recommend the sorts to be pre-

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ferred, since tastes so much differ. Some nurserymen send out catalogues which give the heights, times of flowering, colours, etc., of all the seeds they sell, and the amateur will do well to use one.

Annuals should have plenty of room for the development of their peculiarities. They are generally planted too closely, and thus their beauty is not seen. As to the method of raising them, I would decidedly recommend a seed-bed for most varieties, in preference to sowing them where they are to remain. Many sorts are too tender for early sowing. Then insects torment you, for if your stock is dispersed through the borders you cannot keep your eye on the scattered portions as you can when it is together in a bed. Besides, transplanting is in most cases an advantage, and secures greater vigour to the plant, provided it is properly done. Raise your seeds, then, on a gentle hot-bed, and when they are developed in strong plants remove them to their destined quarters. When you are anxious to have them flower early, or when the seedlings are impatient of a removal, it is a good plan to pot them, when only half an inch high, into small pots, two or three in a pot. You can then get them forward in a frame, and turn them out when frosts are over, without the plants receiving the slightest check.

There is an annual, the beauty of which cannot be too highly spoken of—I mean phlox Drummondii. Its habit of growth makes it very desirable for small gardens, as it is compact, and may be pegged down with advantage. Its varied shades of crimson are truly gorgeous when seen in masses. It continues in flower very late, and a slight frost will not much injure it. Sow the seed now, six pennyworth will stock a large garden. By adopting the plan of potting the seedlings, by June you will have a supply of bushy plants, which will immediately flower, and continue gay till October and November.—*Burgess's Amateur Gardener.*

NEW CHRYSANTHEMUMS.

THE interest excited in the cultivation of the chrysanthemum seems to promise to be even more extensive than ever. The following are a list of the new ones which Mr. Salter will let out this spring. For the sake of information as to growth, etc., B denotes those with petals more or less naturally incurved; these alone are cultivated by exhibitors for cut blooms, as such only

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attain the symmetrical and spherical form recognized as the model of perfection. Flowers of this description are seen at most of the London shows, varying from four to six inches in diameter. To obtain this size peculiar treatment is adopted, the whole vigour of the plant being concentrated in four or five blooms, and all loose or misshapen petals carefully arranged or removed. It would be folly to disguise this fact, which is only noticed to prevent disappointment to those who may be led to suppose that flowers of these dimensions are the result of ordinary culture.

S refers to such as are most suitable for specimen plants, having a graceful habit, persistent green foliage, and profusion of flowers, incurved or reflex, being alike eligible. Plants of this description are not unfrequently exhibited from twelve to fifteen feet in circumference, covered with hundreds of flowers.

L indicates the late-blooming varieties, several remaining in flower throughout December, and during the early part of January, and are, therefore, exceedingly useful for the conservatory, or bouquets, at a season when few other flowers can be procured.

Large-flowering Varieties.—Ajax (Salter), dark blood-red, incurved, large flower, B.; Alarm (Clark), dark violet-crimson, beautifully incurved, extra fine, for show, B. S.; Alma (Clark), large crimson, reflexed but good, S.; Arthur Wortley (Salter), rosy amber with gold tips, very full and beautifully incurved, model of form, B. S.; Atalanta, large, cream with rosy tint, full and incurved, B.; Beauregard (Clark), dark maroon, very full, and finely incurved, B. S.; Boule de Neige (Clark), incurved white, L.; Bouquet des Fleurs (Clark), dark red crimson, large, full, and finely incurved, B. S.; Clipper (Clark), red carmine and gold shade, incurved, S.; Crista Galli, large, fiery red and orange, tasselled in the way of "Duc de Conegliano," but finer colour, very showy garden variety; Emperor (Salter), very large blush anemone with sulphur centre, changing into dark cherry, free and good, B.; Favourite (Clark), large rose pink, finely incurved, B.; General Harding (Clark), Indian red with orange shade, finely incurved, beautiful show flower, an improvement upon "Two Coloured Incurved," B. S.; Grand Sultan (Clark), amber, large and incurved, B.; Jewess (Clark), orange and red, large, very free and fine for specimens, S.; John Bunyan (Salter), bright rose, full and fine, incurved, B. S.; Madonna (Clark), large pink, rather quilled, but pretty; Mrs. William Holborn (Salter), ivory white, large, and finely incurved, B. S.; Mr. Murray (Salter), dark violet rose, reflexed, but very full and fine, S.; Novelty (Clark), large blush white, fine centre and beautifully incurved, but requires good cultivation, B. S.; Phaeton, large, dark golden orange, free, full, and very showy for garden or greenhouse; Pictorium Roseum (Clark)

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red salmon, incurved and fine for specimens, S.; Pompeii (Clark), cinnamon and orange, large, and incurved, B. S.; Queen of the Isles (Salter), pure white, beautifully incurved, larger and much better than "Vesta," B. S.; Wonderful (Clark), bright cherry crimson, splendid colour, large and full, when young the flower is incurved, but afterwards reflexed or tasselled; Yellow Perfection (Clark), golden yellow, beautifully incurved, a perfect model of form, superior to "Plutus," B. S.

Pompones.—Augusta (Salter), blush white, dwarf, double and free, excellent for specimens, S.; Ceres (Salter), dark orange, double and free; Christiana (Salter), canary yellow with brown points, dwarf, free, double, and beautiful form, S.; Edith, light rose salmon, dwarf and free; Emily, light rosy bronze, dwarf and free; Eva (Salter), light golden yellow, dwarf and fine for specimens, S.; Fanny, dark rosy red, free and distinct; Jane Amelia (Salter), dark rose carmine, free, double, and very fine, in colour between "Salomon and Riquiqui," S.; Mrs. Turner (Salter), hybrid pompone, pure white, dwarf, free, and fine form, S.; Musidora (Salter), bright chestnut red and orange, small but beautiful form, and free blooming.

NOTES AND QUERIES.

[We shall feel obliged by any Correspondent or Subscriber forwarding answers to any of the following queries.]

OUR LISTS OF FLORISTS' FLOWERS.—We have been enabled, through the kindness of several friends, to give select lists, part of which are inserted in this month's number. We again repeat, that we shall be happy to receive further communications, which, together with those already received—for which we return our thanks—shall be inserted in future numbers.

SIR,—I have taken the "Midland Florist" from its commencement, and am always glad to hear of its success. I now write to offer a suggestion, which, in my *humble* opinion, would increase the sale of your periodical if adopted. It is to give an article monthly on the management and breeding of canaries, and choice cage birds. There are thousands of admirers and raisers of these little favourites in our large towns; now could you not add these to your contributors? There is no periodical to represent them. The dealers in birds would advertise in your magazine, and numbers of those who would, through this new feature, become

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readers, would also take more interest in Horticulture, and thus one feature would react upon the other. April and May is about the time when breeders of canaries commence operations, perhaps you could announce the subject for the opinion of your readers next month. Yours truly, JOHN RAYNER. *Yoxford, February 1st*, 1860. [We should be most happy to adopt the suggestion of our correspondent. We have already named the matter to several gentlemen closely allied with these feathered favourites, and shall, we hope, next month be enabled to give an article on the subject.]

DOBSON'S FLORISTS' SHEET ALMANAC is a large sheet, full of useful information to the gardener, contains a complete calendar, and select lists of all the best florists' flowers, some of which, at a future time, we hope to extract. It is admirably adapted for the greenhouse or summer-house, and should find a place where it may easily be referred to by every gardener.

TYNAN'S CATALOGUE, LIVERPOOL, has just reached us. We are happy to see that Mr. Tynan is again issuing his seeds in quantities to suit small growers. This is a most excellent plan, and is already appreciated.

ROT IN THE AURICULA.—The rot is, as you imagined, the effect of allowing water to lodge in the heart of the plant. You may always tell that the rot has begun by the outer leaves assuming a purple hue, the plant also leans on one side, and there is a disagreeable smell. You are also right in supposing that it is somewhat infectious; and our advice is that the infected plants be removed, that they be carefully washed, and the rotten parts cut out, dusted with a little charcoal, allowed to dry, and then repot with plenty of peat and sand.

ANSWERS AND OPINIONS.—Mr. John Dobson, jun., has kindly consented to give opinion and answer queries on cinerarias, pelargoniums, pansies, and fuchsias. Mr. Allstree and Mr. Hepworth will also do the same on tulips, and Mr. Hepworth will also include polyanthuses, auriculas, and pinks.

WORK TO BE DONE—MARCH.

Auriculas.—The plants must still be protected, and when sufficiently advanced remove all deformed pips. This will not only strengthen the remaining ones, but will also allow them to attain a larger growth. Water with soft water.

Azaleas.—Those which have began to start must be repotted,

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and encouraged with a little gentle heat, syringing freely in the mornings and afternoons of fine days.—E. CLEETON.

Carnations and Picotees.—This is a busy month, and should the weather prove favourable, planting out may be commenced, covering over with pots till they are well established; these, however, should be removed in fine weather. Towards the latter end of the month, or the beginning of April, a good top-dressing of well-rotten manure should be applied.

Chrysanthemums.—Large flowering varieties should be potted off, attending to the directions as to rubbing out all eyes under the surface of the soil as recommended; pot into forty-eights; stop as soon as they are sufficiently large; use clean pots, plenty of drainage, and a little sand with your soil. Pompone varieties should now be shifted into forty-eights, and stopped when they attain from four to six inches in height, according to the variety. Do not take out more than you can help, for every leaf will afterwards break into a shoot.

Cinerarias.—We have again arrived at the month so interesting to raising of seedlings. Those who are fond of this sort of thing cannot do better than commence with the varieties named in another part of the present number, success must crown their efforts, improvement is noticed every year, and they are becoming quite of a shrubby growth. Specimen plants will require constant attention, at least, such as are intended for show, in order that the plants may be as symmetrically formed as possible; when grown only for home display this extra attention is not necessary. See that the plants are liberally supplied with water and have plenty of room, and should have plenty of air at favourable opportunities; any late struck cuttings not in their blooming pots should be potted without delay.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Dahlias.—Set your roots to work, and if the shoots have attained four inches in length they may be taken off; but, except where a large stock is required, do not commence starting too quickly. Further instruction, detailing the necessary particulars, will form an article next month.

Fuchsias.—Old and young plants will be rapidly growing, see that they are liberally supplied with liquid manure water at bottom and syringed at top; a temperature of 60°, with a moist atmosphere, will soon alter the appearance of the whole stock; give attention to the shoots and see that none break off for the want of a tie. Shift any plants that may have filled their pots with roots. Continue to strike cuttings.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Hollyhocks.—Old roots may be divided and planted out. Cut-

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tings will now root freely in a little heat, from which, however, they should be gradually removed, otherwise they will become tender, and require a considerable amount of protection. Plants may be, towards the end of the month, all planted out.

Pansies.—Out of doors, the plants, in common with other kinds of plants, have suffered very much; however, those which have been snugly housed in frames can now be brought to make up any deficiences which may occur in the bed, after which top-dress the beds; a few warm showers will soon set them all right, and improvement may be noticed every day. If any are required to bloom in pots lose no time in repotting them into their blooming pots; they will grow very fast, and must be well attended to, giving air at every opportunity, and by pinching off a few of the first flowers and also removing the weakest side-shoots; these may be put in for cuttings. Towards the end of the month give them liquid manure. Peg out any shoots which may be getting thick, by this means the plants are strengthened, and the size of the flower improved; keep down the ravages of green-fly and slugs.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Pelargoniums.—This month is well known as generally boisterous, and with keen, cutting winds. It is, therefore, necessary that due caution be observed in ventilating the house. The sun has great power, and with a south aspect the thermometer soon registers very high; top air is about all that can be given, except when the air is warmer. The May plants are beginning to get interesting, and are fast throwing up their bunches of bloom; this may be accelerated or retarded, according to the time they are wanted to flower. On fine sunny evenings a syringe drawn over the plants once or twice a week will greatly assist them, but when this is done, shut up the house with the sun warmth in it, and take care that the temperature does not fall below 45° during the night. In addition to the foregoing, the plants may be often watered with weak liquid manure, this will improve their colours, and give a healthy, vigorous appearance to the plants. See that the plants have plenty of room, on no account have them crowded—better to throw away a few than ruin the whole. Look over the plants occasionally, and loosen any which may be tied too tight, and see that all shoots that require sticks shall be supplied—many a plant is spoiled for want of a stick. Do not shade, except when absolutely necessary, as it induces a long growth. The June plants will be growing rapidly, and should be tied out as often as they require it. If July plants are required, they must be stopped back the second week in the month, and the house should be kept closed for a few days to induce the eyes to break vigorously. Then repot them and encourage a strong growth, by keeping close to

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the glass with abundance of air, and by tying out.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Polyanthuses may, towards the latter end of the month, be removed; supply pretty well with water, and cover up at night, giving the benefit of the air by day.

Roses.—All losses should be made good without delay. Order early. Your hybrid perpetuals may at once be pruned; but leave the Teas, and Chinas, and weak sorts, until next month.

Tulips.—Put on the covering as soon as the first leaf has got up above the soil, to prevent the lodgement of water. This, if once frozen in, will frequently destroy the bloom; it is also an excellent plan, as soon as the leaves are visible, to stir the soil between the bulbs with a stick, for the admission of air to the roots is beneficial.

Flower-garden.—The season, as is usual at this time of year, renders it a ticklish matter to describe what is the best routine. I have this year a large quantity of pots full of bulbs, which I plant out to fill any vacancies. The prunings off rose trees, especially the smooth-barked ones, will strike readily, and if placed round the side of a pot their success is almost certain. If the ranunculuses are not already in the ground no time should be lost. Hyacinths showing their bloom must be protected, or otherwise will run a great chance of injury. Should the weather prove fine and open a stock of annuals may be sown, referring the reader for general management to an article in the present number; I would simply add a list of a few of the best, all old, but still not to be excelled for general use. Convolvulus minor, sweet-pea, mignonette, Nemophila insignis, candytuft, larkspur, ten-week stock, Indian pink, nasturtium—of the last there are some very good dwarf varieties sent out by Carter and Co. You should also, at once, lay in your stock of aster and marigold seed; first come best served, is the motto. A few annuals cost but little, they are very beautiful, even though, in some cases, very short-lived. There are several new annuals this season, but not having grown them we cannot speak of their merits. Novelty-lovers, however, will do well to look after them.

ERRATA.—Page 6, Princess Sæpielea should be Princess Sapietra; queer-leaved, queen-leaved; Le Becon, Le Baron; Fecunda, Jucunda; Bourdelouse, Bordelaise; Laluer Maubourg, Latour Maubourg—this latter also appears in page 8. The sentence commencing that page should also read "With regard to the British Queen, Mr. Baker says, she is more dependent on perpendicular roots, and less so on horizontals, than any other strawberry." The names are French, and we had no catalogue to which we could refer for correct nomenclature, not being yet grown in this country.

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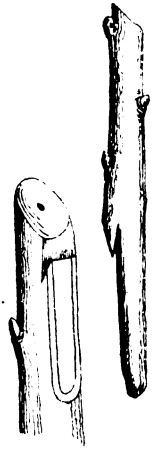

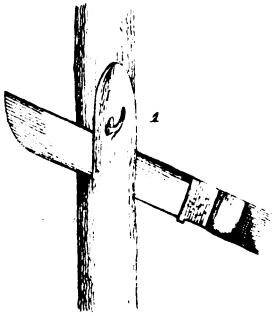

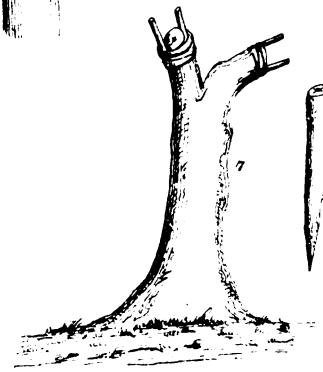

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BUDDING.

THE following simple directions, coupled with the drawings accompanying, will, we hope, be sufficient to instruct the amateur in the art of budding. Although to many readers the operation is one of ease, still, from the numerous inquiries and applications we receive, we are induced once more to enter on the subject in detail.

Some things, such as cherries, pears, thorns, roses, and the like, take or grow with little difficulty; whilst others do not succeed so well, unless worked or budded on a stock congenial to their habits. For instance, some of the finer peaches miserably exist on the Muscle-plum stock, on which the majority of peaches and nectarines thrive; the French Mignon and violet Kalif requiring the pear-plum stock, and the Persian yellow rose appears to be extremely short-lived on the common dog-rose, at least in the Midlands.

We will suppose that the amateur has a dog-rose stock, the variety budded on it previously having died. This stock emits a shoot or shoots, varying from the size of a goose-quill to the thickness of his little finger; growing thus luxuriantly, he is desirous of replacing the head as cheaply as possible, having before paid for one, and this feat he endeavours to accomplish by BUDDING. It will be necessary, in the first place, to procure the means and appliances; namely, a proper knife, some slips of Russian matting, and a cutting of some favourite rose, which should be of the current year's growth. The knife should be thin in the blade and sharp, having a small piece of ivory at the lower part of the handle, with which to raise the bark or stock. We have for years used a surgeon's dissecting knife, or scalpel, and find nothing better. The matting for tying should be slightly moistened, and the cutting should just have accomplished its summer growth. Having removed the thorns from the shoot as near as possible to the main stem or upright stock, the operator may take the cutting in his left hand, inserting his knife about half an inch above the bud he may have taken a fancy to, as shown in Fig. 1. The thumb of the right hand may press very slightly on the bark just below the bud, which will steady the operation, and thus enable him carefully to bring out the knife about half an inch below it. The piece of bark thus cut away is termed the shield, and is represented by Fig 2, and, of course, has a thin portion of the wood brought away with it. The next point is to turn the shield round with the wood towards the operator, he must then gently cut the lower part of the shield to a point by two slanting cuts. Roses will grow with this wood remaining in the bark, so will rhododendrons, and some

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others; but it will be found the best plan to remove it. When the cuttings are in a good working state, the wood may be taken out without injury to the root of the bud, and as this is a subject of paramount importance it will be necessary to detail the process. The shield or piece of bark is taken between the finger and thumb of the left hand, holding it with a slight pressure immediately below the bud, then holding the knife with the forefingers of the right hand, its point is inserted at the top, between the wood and the bark; it is then pressed against the tip of the thumb, and the wood being thus held firmly between the thumb and the knife, it is carefully pulled out and broken as near the bud as possible in the centre of the shield. The lower part will then require moving, this is effected by still holding the shield in the left hand, and inserting the thumb nail of the right hand between the wood and the bark at the lower extremity, the knife point being placed immediately over the bud, the wood is then raised whilst the knife is gently pressed, thus causing the bud to separate easily from the wood. The wood will often come clean out without this precaution, and it is only now described to prevent disappointment to the uninitiated. Fig. 2 represents the shield in this state.

The shield is now placed between the lips of the operator, which, in some degree, hinders the action of the air on the sap, prevents the bud getting dry, and at the same time sets his hands at liberty. He then takes the shoot or stock in his left hand, first having removed the thorns of a rose briar, and with his knife makes first a horizontal cut, and then one lengthwise at the shoot, something like the letter T (Fig. 3), giving his knife a slight lift when he reaches the top or cross cut; this raises the corner of the bark, and he will find no difficulty in inserting the ivory and raising the bark, as intimated in the drawing by a dotted line. Keeping the bark slightly raised with the ivory, he takes the shield from his lips with his left hand and pushes it down to the cut, as shown in Fig. 4. It will be here perceived that the upper part of the shield protrudes above the horizontal cut, this must be cut off, when the bark will immediately fit close. We have seen clumsy workmen making it meet, men who would not give themselves the trouble to think; and though the buds will grow even when this essential point has been neglected, still it is by no means a safe or an advisable plan, for the sap coming in contact with the upper part of the shield will immediately form a junction, and thereby render the operation comparatively certain.

The next point to be considered is tying: if this is performed carelessly or loosely, it will make against the well-doing of the bud, and the whole will be labour in vain. Some writers recommend tape, worsted, etc., as substitutes for bast matting; but

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having used the latter for many years, we do not find there is anything better; it is essential, however, that it should be new and tough, and there is a great difference in Russian mats, which every nurseryman knows. The strips of matting should be moistened, which will make them work or tie easier and better. The operator having inserted the bud, as directed, should now take a strip of matting and place it at the back of the shoot, half an inch below the longitudinal incision, holding about six inches in his left hand; he may then begin to pass the strip of matting from right to left, the forefinger and thumb of the left hand returning it round the back part of the stock to the right hand, thus regularly and lightly lapping it round the shoot till he arrives at the bud, which, of course, he leaves exposed, as seen in Fig. 5. He will continue to pass the matting round just above the horizontal cut, when part of the six inches of matting which he held on the left of the shoot when he began tying, will enable him to make both ends fast, either in a knot or a side loop. Where a great quantity are budded, as in nursery grounds, the latter is the better plan, as they are easily tied and refastened when, from the swelling of the stock, it is found necessary to loosen them.

The amateur must bear in mind that in the strict attention to the above direction depends his chance of success. It is best to bud in the evening, and it will be found a tolerably sure guide to observe that the working of plum, pear, and apple stocks should not be delayed after the terminal buds are formed in the current year's shoots; and as dog-rose stocks are often left with two or more shoots, should his first trial fail he will have an opportunity of repeating it by budding another shoot.

July and August are the best times for the operation on roses, and if our directions and plate are not perfectly understood, we shall be happy to answer further inquiries through the pages of the "Midland Florist."

THE ORIGIN OF SPECIES, AND ITS RELATION TO THE MORPHOLOGY OF PLANTS.

THE sun has risen and has set for so many years with such regularity, that a child may predict, without fear of failure, that it will rise and will set on the morrow at the usual hour. Yet Holy Writ tells us that there was a time when the great luminary did not rise, and there will come a time when it shall set for ever; so that the day must eventually arrive when there will be no safety in depending upon the regular return of the daily light, for there will be a new heaven and a new earth, and a new race, who will observe

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fresh seasons. On this unwritten law of the sunlight many of the sceptics of a former age denied the authenticity of the Bible. On the prophecy of the earth's destruction frantic charlatans have, for nearly two thousand years, poured out vials of wrath on unbelievers—unbelievers in *their* prophecies—uttered from the tripod of profanity. Strange as it may seem, between these two classes of minds there is little difference, both resting their evidence of the life to come on their own fallible deductions from true premises.

This, we premise, because a remarkable book has just been published, "On the Origin of Species by means of Natural Selection;" remarkable not for any great originality of views, but in consequence of the method with which it is written, the facts selected, and the time which has been devoted by its author to the subject of which it treats. Twenty-three years of intense thought and close observation entitle a man to be heard on the subject of such labour with patience. But that such will not be the result in Mr. Darwin's case we may rest assured; for ignorance and prejudice will, in the end, assail the book, as they assailed its forerunner, "Vestiges of the Natural History of Creation."

Like the "Vestiges," Mr. Darwin's work has passed rapidly through four or five editions, and has been reviewed in various quarters; but to stir the lowermost strata of minds takes time—perhaps two or three years—and by that period Mr. Darwin's larger work will be ready; for this is but an instalment, published in anticipation of others working in the same field—as Mr. Wallace, Dr. Hooker, Professor Huxley, and Mr. Lewes, for nstance.

As reasoning beings we will accept with thanks the labours of Mr. Darwin, and suspend our final verdict for three years, meanwhile sifting his opinions, testing his facts, and collecting such evidence for and against his theory as may be useful at the appointed time.

At present facts seem against him. But we must remember that so they did in the famous trial of Galileo, more than two hundred years since; yet his hypothesis has prevailed, and even children now are content to believe that the earth does really go round the sun, notwithstanding the counter-evidence of their senses. Yet Galileo was not the originator of these views, nor Copernicus, nor Pythagoras, nor the latter's Egyptian teachers—he was only the martyr who suffered, and by his sufferings conquered, despite his semi-recantation. So, too, Mr. Darwin is not the originator of *his* theory, nor is the author of the "Vestiges," or Lamarck; for it may be traced back to the time when Jacob slily pealed sticks and laid them before Laban's sheep. Like children

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of one parent, all retain a family likeness, yet differ markedly in character. Lamarck finds his solution of the diversified problem of Nature in the efforts of the individual to attain to something above that possessed by its ancestors. The author of the "Vestiges" finds his in regular consecutive development; Mr. Darwin, in modification by external nature, or adaptability to conditions of existence.

Of the three systems, the latter is, perhaps, the best, its main defect lying in the modifying and selecting organism succumbing to external conditions, which Lamarck overlooked, and put an informing and selecting principle into the lowest organisms. But the subject is beset with difficulties, physical and metaphysical; and, under the circumstances, we think it better to wait awhile than to rashly condemn a system because it will not answer all the questions put to it. Like the *larva*, its present appearance may give but a faint notion of the well-developed *imago*.

Leaving, then, the general subject, we turn to those parts of Mr. Darwin's book which treat of plants; not only on account of some passages there being interesting to florists and horticulturists, but because the earliest attacks on the work have come from observers in the garden and the field, and the best evidence been drawn thence.

To recur to our earliest illustrations, we showed that the sun rises and sets with so great a regularity, that without other evidence we are induced to believe it always has done so, and always will do so. But astronomy has shown that it does not rise or set at all. Science having beaten our common-sense notions, we shift our ground, and say with it, that the earth turns on its axis daily, and goes round the sun in 365 days 5 hours 48 minutes 48 seconds, when it restarts from the same point for another year. Not so, says astronomy again, the equinox has shifted 50 seconds, and it will take 25,868 years to right itself. At least we begin afresh now! Far from it; the sun itself is subordinate to another —a central sun—which is carrying it further into space, whose motions are governed by the Sun of Righteousness.

The above laws of the heavens are the laws of the earth and all within it. Call it the centrifugal and centripetal, the attractive and repulsive, or the conservative and mutative forces, it matters not, we feel the ever-present power of the unchangeable God, and the limitless variety of his productions; and as the minds of readers incline to one or the other of these laws, so will be his belief in Mr. Darwin's hypothesis, that

> "All things change but change—nothing is stable.
> Farther in space the world moves on, and we
> Move with it; nor returns it ever,
> More than the life of yesterday."

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More clearly does Dr. Hooker put it in the introduction to his "Flora of Australia." He there says:—

"The majority of cultivated vegetables and cereals, such as the cabbage and its numerous progeny, and the varieties of wall-fruit, show, when neglected, no disposition to assume the characters of the wild states of these plants; they become stunted, hard, and woody, and resemble their wild progenitors, in so far as all stunted plants resemble wild plants of similar habit; but this is not a reversion to the original type, for most of these cultivated races are not merely luxuriant forms of the wild parent. In neglected fields and gardens we see plants of Scotch kale, Brussels sprouts, or *Kohl-rabë*, to be all as unlike their common parent the wild *Brassica oleracea*, as they are unlike one another; so, too, most of our finer kinds of apples, if grown from seed, degenerate and become crabs, but in so doing they become crab states of the varieties to which they belong, and do not revert to the original wild crab-apple. And the same is true, to a great extent, of cultivated roses, of many varieties of trees, of the raspberry, strawberry, and indeed most of the garden plants."

Few of our readers will disagree with Dr. Hooker on this point, for indeed the information is far from new. But what we want to have determined is—What is a Species? To which Mr. Darwin answers, there is none save what man makes by not being able to show the links which join animal to animal, and plant to plant, from the highest to the lowest.

"I believe," says he, "that animals have descended from, at most, only four or five progenitors, and plants from an equal or lesser number. . . . . Analogy would lead me one step further, namely, to the belief that all animals and plants have descended from some one prototype. . . . . All living things have much in common in their chemical composition, their germinal vesicles, their cellular structure, and their laws of growth and reproduction. We see this even in so trifling a circumstance as that the same poison often similarly affects plants and animals, or that the poison secreted by the gall-fly produces monstrous growths on the wild rose or oak-tree."

That it is possible to reduce the number of species we have the authority of Dr. Hooker to show, with the collateral one of such practical men as Mr. Herbert, who says, in the "Horticultural Transactions," I raised from the natural seed of a highly manured *red* cowslip a primrose, a cowslip, oxlips of the usual and other colours, a black polyanthus, a hose-in-hose cowslip, and a natural primrose, bearing its flowers on a polyanthus stalk. From the seed of that very hose-in-hose cowslip I have since raised a hose-

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in-hose primrose. I therefore consider these to be only local varieties, depending upon soil and situation."

But that the oak, the onion, and the mushroom have had a common ancestor in some unicellular organism, now extinct, requires more evidence than Mr. Darwin has as yet brought to bear upon the subject; for he will not allow that Nature ever takes leaps, although he himself may do so in showing the affinity of sub-species, their interfecundation, and their fertile progeny, and thence inferring that the *lacunæ* between species and species have been filled up by sub-species now extinct.

He admits that the breeding in and in of animals or plants produces barrenness—that the breeding of widely-marked species cannot be effected; but what we want to know is—what he has not defined—within what limits and under what conditions may we cross * so-called species? For instance, can all the *Rosaceæ* be crossed, or only the rose proper? Can we by hybridization obtain a species of *Solanea* which shall combine the beautiful flowers of the petunia, the useful fruit of the tomata, the soporic virtues of the tobacco leaf, the deadly poison of the nightshade, and the invaluable root of the potato? If not, what are the limits, and why should there be any?

Though feeling as we do that Mr. Darwin has not yet proved his hypothesis, we would not predict for his book the fate of the "Vestiges"—that of creating much contention and ill-feeling, to be followed by utter neglect. With less that is fanciful, there is more that is based on incontrovertible facts; yet his evidence fails—fails in the very links which he says have perished, like pedigrees furnished by heralds for *parvenus*.

Coleridge has somewhere said, though in other words, "I have never yet found a book so utterly barren as not to have furnished or suggested a new idea." Mr. Darwin's book is eminently suggestive, and any naturalist taking it up, is almost certain to be struck with the ignorance prevailing on all sides respecting what may be termed the "constitution" of life, zoological as well as phytological, as distinguished from its physiology. Of this "constitution," which lies at the root of all Morphology, we shall speak more fully on a future occasion. JACOB FÖRST.

ROSE INFORMATION.

THE following may be interesting, and also useful to rose amateurs. The French have eighteen descriptions of a rose. 1. Fleur

* For practical rules on the crossing of sub-species, see "Midland Florist," Vol. i. (new series), pp. 84, 111, 156.

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tres petite, very small, in diameter from two to three centimètres. 2. Fleur petite, small, from three to five centimètres. 3. Fleur moyenne, medium, from five to seven centimètres. 4. Fleur grande, large, from seven to ten centimètres. 5. Fleur tres grande, very large, from ten to twelve centimètres. 6. Fleur simple, having five petals. 7. Fleur double, having two ranges of petals. 8. Fleur multiple, having three to four ranges of petals. 9. Fleur presque pleine, having four ranges of petals, but showing their stamens. 10. Fleur pleine, full to the surface of the flower. 11. Fleur tres pleine, whose petals present no cavity, and are pressed against each other. 12. Bombée, bomb-shaped. 13. Creussèe, whose petals in the centre are shorter than those of the circumference. 14. Cupuliforme, or cupped. 15. Globuleuse, or globed. 16. Imbriquèe, whose petals are placed symmetrically with respect to each other. 17. Plate, whose surface is flat, or horizontal. 18. Pæoniforme, whose centre petals lie in disorder. These are their eighteen descriptions.

I find, by reading Monsieur Verdier's catalogue, that there are roses which rejoice in two names; viz., Eliza Sauvage, or Madame William; Le Pactole, or Madame Chalonges; Souvenir d'un Ami, or Queen Victoria; Madame Deslonchamps, or Adelaide Pavie; Madame Schultz, or Madlle. Aristide; Charles Sonchet, or Margat Jeune; Henri Lecoq, or Duc d'Istrees; Aubernon, or Madlle. Henriette; Counseller Jordeuil, or Roi de Rome; Dr. Marx, or Marquis of Ailsa; Mrs. Standish, or Froissard; Pourpre Royal, or Duc d'Elchingen.

I find that Monsieur Verdier puts Gloire de Dijon both among Teas and Noisettes, and Triomphe de Rennes among the Teas, instead of the Noisettes. Except the leaves, which are like those of Lamarque, I see nothing Noisette about it. It is a lovely yellow free-blooming rose, but all its abundant blooms (two trees, now four on a briar) were single blooms without accompanying buds, usual in all Noisettes. Celine Forestier will probably run it hard. It has been much recommended to me by a distinguished English introducer of roses, and also by an anonymous correspondent.

I find that "America" was considered by the Americans as their great and best novelty last year; its colour is creamy yellow, and sometimes saffron yellow, tinted with salmon flesh. It is coming here as a present, over the Atlantic, at the fall.

I find that the two roses (H. P.'s) which distinguished themselves at the last June exhibition in Paris, winning the first prize and silver medal of the first class, were Madlle. Eugene Verdier, white, and rose tinted in the centre, and Princesse Imperial Clothilde, white, with yellowish centre; both described as very vigorous.

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I find there are some historic names coming before you, viz:—Admiral Nelson; Comte Cavour; Garibaldi; Montebéllo; Vanqueur de Solferino. These are new H. P's., and the descriptions are tempting. Besides these, there are many others, raised by great men.

I have an American seedling (Dr. Kane) here, committed to my care, to bring out, by the raiser, in the way of Devoniensis, and said to be finer. I shall be glad indeed, if my American brother has succeeded in surpassing, or even equalling, the most perfect and beautiful of all the Teas, in a word, the great English seedling.

Rushton, March 12th, 1860. W. F. RADCLYFFE.

PANSIES.

(*From the Florist.*)

HAVING paid a visit to some of our most celebrated gardens this last spring, and looked over the different pansy-beds, I find there is much to be learnt as regards setting out and arranging the different colours, in order to give a pleasing appearance. I am very much inclined to think there is nothing that can interest any one in the spring of the year more than the pansy. I therefore crave space for a few remarks which I wish to make respecting this showy spring flower. The kinds I allude to I have seen this season. The varieties named are equally fit for show as for bedding purposes. In my opinion nothing can look better than a nice bed of pansies on a lawn. The first I will mention is Ariadne, bright purple self, the finest pansy I ever saw; I rather think it was exhibited at Haltwhistle South Tyne Pansy Society, in June, 1857, by Mr. Douglas, of Rosebank Nursery, Edinburgh, and obtained a certificate for being the best self pansy in the room. Also Royal Purple obtained a certificate at the Scottish Pansy Society, Edinburgh, in June, 1859.

Selfs.—Earl of Derby, black, beautiful; Duke of Sutherland, rich claret; Flower of the Day, plum; Indian Chief, dark shaded blue; Jeanni, shaded blue, extra fine; Mrs. Dodwell, yellow; Royal White; Sir C. Campbell, dark; Uncle Tom, deep mulberry; King of Purples, dark maroon, rich; Canary, yellow; Andy, black.

Miss Bentley, gold and reddish maroon; it obtained a certificate in June, 1857, at South Tyne Pansy Society. This variety is, therefore, not new, but it will beat half the new kinds out. The following are good sorts for bedding purposes, and should be planted largely in every spring garden; they consist of some of the

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best of the yellow ground kinds:—Duchess of Wellington, yellow and deep purple; Lord John Russell, yellow and crimson; Master Grey, gold and maroon; Sir John Cathcart, gold and crimson; William, yellow and dark maroon, extra fine; Rubens, yellow and rosy purple; Perfection, rich gold and maroon; Charles Turner, yellow and crimson maroon; Cyrus, gold ditto; Emperor Napoleon, rich yellow and bronzy purple; Victory, yellow and red.

There is another class of pansies, namely, the white and straw ground. Miss Reid, white and blue, extra fine, was awarded a certificate of merit at South Tyne Pansy Society; Countess of Rosslyn also obtained a certificate at Edinburgh in June last, for the best white ground pansy exhibited; and I can say it is by far the best, if bloomed properly. Earl of Mansfield, white and blue; Miss Talbot, white and dark purple; Miss Nightingale, white and deep purple; Louisa, white and blue, extra fine; Lady Napier, cream and blush purple; Col. Windham, straw and deep purple; Rebecca, white and light purple; Indispensable, white and purple; National, white and lilac; Picotee, white and pale porcelain blue.

Having thus named a number of good pansies of each sort, fit either for exhibition purposes or for bedding, allow me to repeat that there is no plant more worthy of cultivation than these little gems for small beds or edgings, if arranged so as to have dark purple in the centre, gradually shaded down to the edge, which should be white. I might add a few more, but these will, I think, be a great gain to those who have them. Season, of course, has a great effect—in fact, I should say it makes all the difference. Pansies always do well in a moist summer. I will in a future number give hints on the cultivation and general management of the pansy, which, I have no doubt, may interest some of your readers.

CHAS. B., JUN.

Iford Lodge, Sussex.

PLAIN DIRECTIONS FOR GRAFTING.

IT often occurs that the cultivator of a small garden finds, to his great discomfiture, that he has apple-trees either of a very bad quality or extremely unproductive. It is true that he may dig about them, and apply sundry dressings of manure, he may also root-prune them by digging through the large and spreading roots, and should he by these means induce fertility, still it would not make a sour variety sweet, or prolong the qualities of a bad-keeping apple. He may have sundry plum suckers in his garden on which he may be desirous to graft a new or good sort, or he may wish to divide the produce of his tree between two or more

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varieties, which will follow each other in their time of ripening, so as to prolong the enjoyment which he derives from his plot of ground; or his children may have sown pippins of the pear or apple, or the stones of the plum or cherry, and which he would feel great pleasure in himself rendering productive by working or grafting with with some improved varieties.

We then premise that a branch of a tree has to be operated upon; if a young one, the system of whip grafting will be best; if an older tree, the rind grafting will be best.

For the first, or whip grafting, it will be necessary to cut the top part of the branch in a clean and smooth manner, then, with a very sharp knife, make a cut, shaving through the bark and carrying away a small portion of the wood, as seen in the right hand part of Fig. 6.* It is as well that this cut be made of the same width as the scion, or graft; but this is not absolutely necessary, for the graft will take well when touching only one of the sides and the lower part.

A small tongue or slit may then be made in the stock (as shown in the left hand part), the lower part being directed towards the operator's body, and held firmly between the thumb and forefinger, the part which is to be cut resting on the thick part of the thumb; then, with a single draw of the knife, the scion must be cut in a slanting direction, about the same length as the previous incision on the stock, a similar tongue being made at the upper part, as shown in the drawing. Then place the graft on the stock, inserting the tongue in the slit, making the bark of the scion and stock fit closely together, not only at the side or sides, but at the lower end. It is not only essential to the success of the operation that the above directions should be carefully attended to, but much depends on the tying and claying. Some soft new bast matting should be slightly damped, and carefully and tightly tied round it, still keeping the edges of the scion and stock securely together. A ball of well-tempered clay, in which some fresh horse-dung has been mixed (in some cases moss and short hay is added), is then taken and rolled between the hands till it has assumed the shape of a sausage, it is then applied to the lower part of the graft, and carefully wrapped round it with both hands; it is then fastened over the part tied with the matting, by squeezing and moulding it into the form of a lemon, taking care that there is no crack or vacancy left, either at the top or bottom, as the ingress of air or moisture is opposed to the well-doing of the graft.

Rind grafting needs but little details. The tree should be cut horizontally, and smoothed off at the end. The scion or graft is then cut, as shown in the drawing, Fig. 9, with a slight shoulder

* See plate, Budding and Grafting.

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and a point. A piece of thin, smooth wood or bone is then inserted between the bark and the wood, and being drawn out the scion is introduced as far as the shoulder; bind round with strong bast, and place a good lump of clay, as directed for other modes of grafting. The middle and latter end of April will be found the best time for grafting in this method, because the bark will then raise without splitting.

In conclusion, we may say that some trees and shrubs not only require being well clayed, but also that the operation to be performed so close to the ground as to be earthed up in the manner of potatoes, by which means the air is excluded, and the graft kept in a much more equable temperature—a point, in many instances, of great importance.

THE EYE WITNESS.

Some few weeks ago I promised you that I would contribute for the "Midland Florist." By the by, I am, I think, too prodigal of my promises; however, never mind, I always like to help a friend. Well, I was saying that I promised I would report to you (and then you can report or non-report, as your Conductorship may please), the best things I see at the different exhibitions. The great show of the month is the hyacinths, and as I have paid visits to the principal nurseries where they may be seen, I think I will offer a few notes on these. First, I will begin with the exhibition which I have cultivated, among these I have grown all the new varieties; these are now blooming in my own greenhouse. In double white I have an old favourite, Miss Kitty, a truly splendid creature; her spike has only eight blooms, but they are really fine, rather tinged with a pale pink. This is my best and only good double white this season. In double red, Lord Wellington is first. He has a famous spike of flowers, which are of a good size, and the colour is also fiue. Bouquet Tendre is another sort, a favourite; as also is Rex Rubrorum. Grootvoorst is a large double and compact variety, of a delicate blush. Lieutenant Waghorn is another good variety, quite new; and although my bulb was excellent, still there are several complaints, so I am afraid that our friend the Lieutenant, like many other military and naval gentlemen, is not over constant. Queen Victoria is also a new one, and is good, her truss large, of a fleshy rose colour, compact and very double. In double blue I have two new ones, Louis Phillippe, a dark, and L. Importante, although the former is hardly so good as I expected, from a letter received from Holland; the latter is extremely fine, almost like wax. In single

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reds I had Amy, very good; Cosmos is a new one this year, and has a famous habit, the colour also being fine; Princess Alice has also been extraordinarily good, although last year it was almost a failure. In single blues there were many new ones. Regulus is a good variety, of large truss; and Argus is also fine; my bulb of Couronne de Celle, unfortunately, went back, otherwise it came with good character from a first-rate Dutch correspondent. Single whites were also numerous. Florence Nightingale did not bloom, otherwise it was to have been first class. The others are all older varieties, which I shall notice in my other notes.

I went to Cutbush's and to I don't know how many other collections; however, I began at eight in the morning, and ended at dusk. I must have seen some thousands. Cutbush's were in magnificent order, and, although I have been there every season for many years, I never remember to have seen them so good before. The following notes taken of the best flowers may be interesting:—

BLUES.—*Single:* Argus, very deep blue, with clear white eye, a new flower, and may be pronounced good; Baron von Thuyll, a deep blue, good truss, and fine spike, an old and cheap variety, still excellent; Charles Dickens still keeps up his position, very large trusses of this variety were shown at almost every place I visited; Regulus, a good variety, and I believe a new flower. I have not, however, seen it before. *Double:* L. Importante, a new flower, of large size, was good; Laurens Koster, an older variety, was magnificent, it is of a fine purplish blue, large and bold in the spike.

REDS.—*Single:* Amy, a new flower, is worth growing, it is of a rich deep colour; Florence Nightingale, a new flower, deep rose, of large spike, and good form; Madame Hodson is an old variety, of good spike, deep red, striped; Von Schiller, a new flower, pink shaded, good spike, and fine bells; Norma maintained her former good character, a fine clear flower, of a rose colour; Lady Sale was conspicuous, of a large spike and bell; Lina, an exceedingly bright flower, fine compact truss, but not large. There are an abundance of good flowers in this class, and at next planting season I will give a selection. *Double:* Lord Wellington is an extremely fine sort, a new flower, light rose, large spike, and the flowers exceedingly beautifully arranged; Koh-i-noor is an excellent variety, and I believe to be a new one, for I only saw it at Messrs. Cutbush's; Princess Royal, rose, neatly shaded, a good spike; Queen Victoria, orange-rose, double, good spike, and new; Susannah Maria, something similar in colour, of good spike, and very fine.

WHITE.—*Single:* The first in this class are Madame Von der

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Hoop, of large size, good bell, and extremely pure; Snowball, good white, clear, fair form, extra eye, and an immense spike, this is new, and promises well; Gigantea is not quite pure, but still a first class variety. There were many of the old varieties still excellent, but of these hereafter. *Double:* In this class I saw nothing to exceed the old varieties.

YELLOW.—There is also nothing new in the yellow class. There are novelties; but these I saw in such various places, that really I know not how to depend a judgment.

ROYAL BOTANIC EXHIBITION, MARCH 21ST.—A very interesting meeting. Hyacinths were good, but as these have been described above, I see no use in reiteration. The things which struck me most were some handsome seedling heaths, from Mr. Low; to three prizes were awarded. Mr. Lawrence, of Farnham Castle, sent Acineta densa, a species with greenish-yellow flowers spotted and blotched in the centre with brown; the charming Dendrobium Farmeri with nineteen spikes of bloom on it, and Cypripedium villosum. A seedling azalea, called Prince of Orange, possessed fine form and considerable brilliancy of colour; also a handsome new tea rose, called President, and a promising new hybrid perpetual, called Mrs. Standish. A new Forget-me-not-ike plant, called Myosotidium nobile, a native of the Chatham Islands, attracted considerable notice. Of early tulips, Tournesol, Scarlet Duc van Thol, Rex Rubrorum, Vermilion Brilliant, yellow and white Pottebakker, Imperator and Prince de Ligne, were good. Cinerarias, Messrs. Dobson and Son's plants were all very finely grown, consisting of Brilliant, a good purplish-crimson self, B. Rothschild, Etty, Master F. Watson, Mrs. Hoyle, and Captain Schreiber; the last a good blue. In seedling cinerarias, Flower of Spring (Turner), a large purple and white kind, with a dark centre; Royal Charlie (Turner); Lurline, Mabel, and Miss Eyles (Turner); Marginata (Wiggins); and Tyrian Prince and Géant des Batailles (Smith). A very new and pretty light-coloured primula, called Primula Fortuni, was also very good. I shall again make mention of others which I noted, but wish to see them again at the Crystal Palace, and elsewhere. EYE WITNESS.

DAHLIAS.

To the Editor of the "Midland Florist."

THE following list of dahlias I have selected with care, for their really good qualities; opinions may differ on some of them, but only in choice of colour, rather than any faults they possess.

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Last year was a favourable season for the dahlia, I therefore had opportunity to test their merits. Growing them, as I do, on a large scale, solely as an amateur, the advice from such a source is, I think, preferable to notes taken at a flower-show, when it is intended to benefit others.

It may not be known to all your readers to what apparent perfection a dahlia bloom may be brought to by skill and trickery, to be so well done as to elude the passing glance of the censor; there are thousands of plants sacrificed yearly in appearance for the purpose of obtaining a single bloom from each for exhibition —that bloom being taken as a specimen of ordinary cultivation. This being the case, I think that the twenty-four or twelve blooms that may have a prize ticket put on are not always the best in cultivation, therefore no guide to the amateur what to buy. But more of this anon.

Those named in the list I selected while growing, under my own supervision, without any intention whatever of exhibiting. They may all be procured at a reasonable price. Most of the old ones are quite equal in character to the best new ones.

To amateurs about commencing dahlia growing, I should recommend those marked with an *, as being beautiful. I have many others, but do not think them worthy of notice.

DAHLIAS OF 1859.—*Selfs:* *Chairman, *Disraeli, *Emperor, *Golden Drop, *Lord Eversley, Orb of Day, *Pioneer, *Rosebud. *Fancies:* *Comus, *The Flirt, *Jessie, *Mrs. Charles Kean.

OLDER VARIETIES.—*Selfs:* *Amazon, *Beauty of Slough, Cherub, *Dr. Gully, Duc de Malakoff, *Duchess of Northumberland, *Duke of Marlborough, *Empress, *Fairy Queen, *Hon. Mrs. Trotter, *King of Yellows, *Mrs. Seldon, *Lady Popham, *Lollipop, *Lord Fielding, *Marian, *Merveille, *Midnight, Mrs. C. Bacon, *Miss Pressley, Primrose Perfection, *Lady Le Bouchere, Satter's Defiance, *Lady Folkestone, Fanny Keynes, *Andromeda, Daisy, *Salter's Queen, *Mrs. Church, *Mrs. Legge, *Mrs. Wheeler, *Opatata (fine white, constant), *Pre-eminent, *Princess Royal, Miss Compton, *Sir J. Paxton, *Standard Bearer, Touchstone, *Triomphe de Pecq, *Village Gem, *Miss Caroline, *Magnet, *Mrs. Edwards, Sir F. Bathurst, *Fearless. *Fancies:* *Duchess of Kent, *Lady Paxton, Magician, *Mrs. Hansard, Pigeon (rather small, but good), *Duchesse de Brabant, Triomphe de Robaix, *Baron Alderson, *Imperatrice Eugenie. *Stripes:* *Beauty of High Cross, *Carnation, Gloire de Kain, *Inimitable, Marc Anthony, *Margaret, Oliver Twist, *Mrs. Boshell.

St. Lawrence, Jersey. JAMES LEVESQUE.

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BROCCOLI AND CAULIFLOWER.

MR. CONDUCTOR,—Possibly there is no part of England so favourable to the growth of the Broccoli as the islands of Jersey and Guernsey, in which latter place the plants are raised and sent to Jersey, the finest broccoli being invariably grown from Guernsey plants—the soil of that island being, as far as I can judge from a personal visit, of a sharp, gritty, and porous nature, such as would occur from the breaking down of granite and sandstone, with a small admixture of peaty loam. The appearance of the soil, from the preponderance of the first-named substances, is anything but prepossessing, but, nevertheless, it is extremely fertile, aided, no doubt, by its northerly aspect. The method of rearing plants in Guernsey is, to sow them in March, on land prepared for parsnips, the seed being sown broadcast. As the season advances towards planting time, the smaller plants are drawn for sale, and the largest are left in the ground till maturity, receiving no other treatment than the occasional hoeings required by the parsnips—the broccoli, being only of secondary importance, are left several feet apart; a few of the best are selected for producing seed. Here again the same indifference is manifest, no care is taken to prevent impregnation from a species of Drumhead cabbage, but not so large or coarse as the Drumhead, peculiar to the island; both are producing their seeds scarcely a few perches off, and what may appear strange, both species keep true to their character.

Having given an outline of the culture of broccoli in Guernsey, I proceed to give that of Jersey. The practice is to procure plants, as I stated above, of Guernsey growth, and commence planting from the 15th to the 30th of July, in ground well manured—principally with cow-manure. The most sheltered spots are selected; the plants are put out in rows, two feet apart, receive a hoeing or two, and are never watered after they have rooted. They begin to head in average seasons in the month of February, the greater number heading in March. Guernsey plants, with this culture, produce heads that measure twelve inches diameter, close and compact, and of delicate flavour.

Broccoli-seed procured from the Guernsey or English growers, if sown in Jersey so early as the month of March, would to a certainty button-off—that is, produce premature heads, the size of a shilling—unless they were sown on cold land, with a northerly aspect; our island, having a south aspect, being the reverse of Guernsey.

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Not always sure of having Guernsey plants when I required them, I have recourse to my own rearing, and am successful. I do not approve of early sowing, or large plants. My experience has proved to me that the early sown seed does not produce heads fit for table one week earlier than those sown the first week in May. That time I find the most favourable, and therefore recommend it to others. I have grown the following:—

Grange's, Adams' Early White, Brimstone, Chappel's Cream, Dilcock's Bride, Dwarf Russian, Ellitson's Mammoth, Hank's Late, Knight's Protecting, Lydiard's Ditto, Penzance, Miller's Dwarf, Snow's Early, Queen of Dwarfs, Wilcox, Rook's Late, Waterloo.

Of these, and a few others, I have selected the finest; viz., for first use, Adams' Early White; second supply, Ellitson's Mammoth and Waterloo; last cutting, Queen of Dwarfs—a very beautiful broccoli—would hold out till the first week in May. As regards sowing, any land that has not been used for the Brassica tribe should be selected, as a preventative to club-root, slightly manured, so as not to produce large ungainly plants. If the soil is at all tenacious, cover it with ashes or sand after digging it; when the plants are drawn, they come easy, with plenty of fibrous roots; level a little; sow the seed four ounces to the perch; rake it in lightly, and then cover the whole seed-bed with a coating of fine sand—a simple matter, but a specific for the blackbeetle-fly; it acts in a two-fold manner—first, it prevents the surface where the seed is deposited drying; secondly, by closing effectually the surface, as to afford no shelter to the fly on a dewy night or in showery weather, consequently the insect forsakes the seedlings. I expended £10 in experiments, and lost 25 lb. of seed in one year. This was one of the experiments. I follow up the practice of sanding the seed-beds, and never lose a plant by black-fly. The same holds good with the cauliflower and cabbage.

When the plants are ready, which will be about the last two weeks in July, prepare the ground with a dressing of good solid cattle-manure, and two or three pounds of salt per perch; set the plants out in three-feet rows, and thirty inches in the row, but single rows, several feet apart, do better. The later kinds of broccoli are much benefited by an application of liquid manure or guano, as soon after Christmas as possible; if done much before, it forces them, and they are not so well adapted to stand severe frosts. Guano after Christmas produces an astonishing effect, particularly if applied in wet weather, but not otherwise. Five or six pounds are sufficient for a perch of ground.

My practice is to plant my onion ground with late broccoli, the onions being in drills; by the time the plants are rooted, the

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onions are removed, and the ground forked over. These broccoli are generally the finest. I never earth up, but keep the ground clean and open by the use of a pony-cultivator or light horse-hoe.

Cauliflower.—The culture of cauliflowers is much the same—the only difference being in the times of sowing. I give preference to the Walcheren Cauliflower, and will commence with their culture from the present time. The first sowing should be made in March on an early border; there will be no fear of the black-fly with this sowing. The second sowing must be made in April; this and the former sowing, on very rich land, a little Peruvian guano sown with the seed will help the young plants. The third sowing in May should also be forced in the same manner. Some sow in June, and they do well if sown on a north aspect, and planted in low, moist land. In all cases the land must be extremely rich. For transplantings, the following will be a good dressing:—Six barrowfuls of cow-manure, six pounds of Peruvian guano, three pounds of salt. Dig the whole in; avoid watering; if the ground is dry, soak it and the dung before digging; watering the plants occasions club. Four months may be allowed as the time from seeding till maturity. They are apt to button-off in very hot weather, but follow the directions, and failures will be few. The August sowing should be on a south border, in rather poor land; it should not be delayed beyond the 22nd. The plants of this sowing will be ready early in March. Planting on rich, sheltered land, starve the plants in their early growth, and they will require no protection in the winter. This plantation will produce heads in May and June.

JAMES LEVESQUE.

Grassdale Lodge, St. Lawrence, Jersey.

REPORTS ON NEW ANNUALS.

Acroclinium roseum (name from *acros*, a summit, and *clinios*, a bed, in allusion to the receptacle.) Rose-coloured A. Composites.—Stems erect, numerous, one to one and a-quarter feet high, quite simple, the primary ones producing opposite shoots from their base, which in their turn emit others. Leaves linear, sessile, pointed, smooth, one inch or more long. Flower-heads solitary at the summit of each stem, from one to one and a-half inches in diameter, with a bright yellow disk of tubular florets and a many-leaved involucrum, the innermost scales of which have rose-coloured spreading tips simulating a ray; receptacle flat, pitted near the margin, papillose in the centre; florets of the circumference fertile, with very villous snow-white fruit, and a pappus of

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about fifteen to twenty densely plumose paleæ, united at the base, and tipped with a yellow club-shaped brush, to which the colour of the disk is due. This is a very pretty annual, of an everlasting character, and of the easiest management in almost any soil; it is usually treated as half-hardy, but its seed will vegetate in the open border in April and May. Under cultivation it shows a disposition to sport its colour, and already two new varieties are offered, one pure white, the other deep rose-coloured; the latter we have not yet seen. From S. W. Australia, between the Moore and Murchison rivers. The yellow brush of the pappus presents an interesting appearance under the Stanhope lens.

Amarantus tricolor. (Three-coloured A.)—Stem two to two and a-half feet high, erect, branched, tinged with purple. Leaves oblong-lanceolate, of a yellow colour in their upper half, shading into red near the centre, and green at the base. Flowers small, greenish, in lateral clustered spikes, monœcious as in the other species; the perianth usually of three to five persistent leaves, staminiferous flowers triandrous, fertile ones with three styles and a one-seeded capsule, splitting round when ripe. An old inhabitant of our gardens, having been cultivated at least a century since, which, until recently, seems to have been quite neglected. Now that plants possessing ornamental foliage are more in request, it is likely to meet with the attention it well deserves, though somewhat more tender than speciosus and caudatus. It probably requires a warmer climate than our own to develop to the full extent the rich tints which characterize this species, but even under an English sun, many highly effective specimens may be obtained. In raising seedlings, it often happens that many of the batch exhibit little or no trace of tricoloration. All such should be discarded, those only being preserved which from the first show a tendency to become coloured in a marked degree. Particular specimens may be increased by cuttings. It requires only the treatment of other half-hardy annuals, but should have as warm a situation as possible, and soil only moderately rich. Native of East Indies. It is the *Joseph's Coat* of our American cousins.

Callistemma hortensis pæoniflora (Pæony-flowered or French asters).—These splendid varieties now form so important a feature in decorative gardening, that a more extensive notice than was before given will not be out of place. Though doubtless many cultivators have concurred in developing the beauties of this plant, it is to the Messrs. Truffaut, père et fils, of Versailles, that the floricultural community owe the almost perfect results now attainable. Year by year new varieties have been seized and fixed by careful culture, until the series now comprises several

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distinct classes, which are, however, all grouped under the somewhat inaccurate designation of Pyramidal aster, in allusion to their general habit of growth, which is that of an inverted pyramid. The leading sections are:—1. The *pæony-flowered*, in which the flowers are almost spherical, the petals being elegantly incurved. In the sub-variety, called Perfection pæony, the petals are straight and very regularly arranged, the result being a flatter surface than in the pæony-flowered. 2. The *imbricated*, in which the florets are shorter than in the previous section, and slightly reflected outwards, as well as imbricated, the result being a more compact, though somewhat smaller flower-head than in the first or next section. The Imbricated pompon differs only in the smaller size of its capitules. Both are exceedingly attractive from the regular disposition of the florets. 3. The *chrysanthemum-flowered*, which has long, flat florets, curved outwards, as in many of the chrysanthemums; the largest flowers are met with in this section, which is further divided into tall and dwarf. Each of the foregoing sections comprises several colours, both selfs and striped, or bordered. The successful culture of these highly ornamental varieties depends essentially—1st. On the seedlings suffering no check at any stage of their growth, either from being too crowded at first, or from transplantation being too long deferred, or from that operation being performed without due attention to shading and watering. 2nd. On sufficient space being allotted to each plant in the blooming bed; fifteen to eighteen square inches being the minimum. 3rd. On the employment of a deeply-trenched and well-manured soil. If to these hints we add that the best period for sowing is from the end of March to the middle of April; that the seedlings should be pricked out as soon as they have two leaves; and that the final transplantation should take place when the plants are three or four inches high, we have given an outline which any intelligent gardener will know how to fill up.

Chrysanthemum tricolor Burridgeanum.—The original C. tricolor or carinatum has, as is well known, white ray florets, with a circle of yellow at their base, surrounding the brownish disk. In the present beautiful variety raised by Mr. F. K. Burridge, seed-grower, Colchester, this yellow ring is accompanied by an outer one of rich crimson, which contrasts finely with the pure white of the rest of the florets. In common with many other seminal varieties of various annuals, it does not however appear to be yet completely fixed, but we trust may speedily become so.

Clarkia pulchella marginata.—A pretty variety, differing only from the species in having the lobes of the petals tipped or margined with white in various degrees. Like most other mere seminal varieties, this plant sometimes fails to reproduce itself by seed,

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and it is worthy of notice that in many plants which ultimately produce white-margined blossoms, the first flowers expanded are self-coloured.

Cosmidium filifolium, var. Burridgeanum (Burridge's C).—Habit and foliage as in the species. Flower-heads rather larger in size, differing from the species in the eight ray florets, which are wedge-shaped, being of a very rich deep crimson-brown, approaching in some specimens to black, with a narrow orange-coloured margin; disk brown as in the species; outer scales of involucrum linear-lanceolate, erectish, papillose; inner ones ovate-acuminate, membranous, the tips spreading; the seeds are shorter and thicker than those of the species, and are easily distinguished from them. This is a very beautiful annual, producing, when planted in a clump, a very striking effect; it flowers considerably earlier than the species, and like that usually succeeds best when raised in a close frame, or gentle hot-bed, and afterwards planted out in light soil. In sandy loams the seed may be sown in the open border, about the middle or end of April, but the plants will not bloom so early. The origin of this fine annual is involved in some obscurity, but it is probably a wild variety from Texas, and not, as some have supposed, the result of cultivation.

Cuphea miniata purpurea (Hybrid purple-flowered Cuphea.) Lythrum tribe.—Stems one to two feet high, rather diffuse, much branched, the lower branches spreading horizontally, clothed with coarse red hairs, free from clamminess. Leaves opposite, shortly stalked, lanceolate, two inches long, rough from coarse white hairs. Flowers in leafy racemes, terminating both the main and lateral shoots; peduncles inter-axillary, one or two from each joint, in the latter case forming a one-sided raceme; calyx nearly one inch long, tubular, ribbed, clothed with red hairs, the base projecting above; limb six-toothed, the upper tooth much the largest, and somewhat erect; petals six, varying in colour from rich violet purple to pale rose, somewhat orbicular, unequal in size, the two upper ones much the largest, and with longer claws than the four inferior ones; stamens eleven or twelve, two of them with the filaments very woolly at the extremity; style simple. This is rather a pretty plant, flowering all the summer in moist soil; is identical with the C. speciosa of some of the seedsmen; and it is said to be a hybrid between C. miniata and C. viscossisima, raised by M. Delache, of St. Omer. Requires only the ordinary treatment of half-hardy annuals.

Dianthus sinensis Heddewigii.—This fine new variety of the Indian pink, differs from the species chiefly in the larger size of its flowers, which in most of the specimens are fully three inches in diameter, and present as great a diversity of shades as the

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commoner varieties, though at present the blossoms are single. In habit, the plant is somewhat dwarfer than the species, but the specimens vary in this feature. It is reputed to be of Japanese origin, and has been introduced to cultivation by Mr. Heddewig, nurseryman, of St. Petersburg. The D. sinensis giganteus is but a variety of the present plant, and can scarcely claim a distinctive appellation.

Linum corymbiferum. L. luteum of gardens. (Corymb-flowered flax.)—Stems one to two feet high, several from the same root, erect, smooth, striated, branched near the top. Leaves lanceolate, acute, three-nerved, the margin with minute spinous denticulations. Flowers rather small, in a much branched corymbous panicle, the branches mostly dichotomous, with a flower in each fork; pedicels scarcely equal in length to the calyx, except in the forks, where they are longer; calyx segments lanceolate-acuminate, with serrulated margin; petals obovate, about twice as long as sepals, glossy yellowish-buff, with darker veins; stamens distinct; filaments flattened at base; styles five diverging; stigmas capitate; seeds very small, oval, light glossy brown. From Algeria. A very neat hardy annual, producing a profusion of flowers from July to September, and requiring to be sown early in rather light dry soil, and a warm exposure. In strong rich soil, its growth is more robust, but it does not bloom so freely or so early. We believe this species has been sold for L. tenue, also an Algerian plant with much narrower foliage.

Linum grandiflorum.—Further experience has fully confirmed the first impressions entertained of its value for decorative purposes; but, unfortunately, much of the seed offered for sale germinates less certainly than could be wished. The causes of this unwilling growth are involved in mystery. We have, however on several occasions, found old seed to vegetate more readily than new, and at the moment we are writing, a sample of seed harvested in 1858 is showing a larger per-centage of seedlings than newer seed. It has been proposed to steep the seed for a few hours in water previously to sowing, the mucilage thus developed being removed by rubbing upon a cloth, but our own trials of this method have had no effect in increasing the per-centage of seedlings. Those who have recommended this troublesome process, would, we are inclined to think, have succeeded as well with unsteeped seed. In any case none but *comparative* experiments on this point can have any value. It is worth while to remark that seed imported direct from Algeria grows readily enough, even when fresh, that French seed stands next in order of merit, and that seed harvested in this country is the worst of all. It would appear from this that the further we advance northward,

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the less favourable the conditions will be found for the development of the vitality of the seed of this plant.

L. Menziesii (Menzies' Lupine).—Stems two and a-half feet high, erect, branched, pilose. Leaves of nine to eleven lanceolate, spathulate, leaflets; stipules linear-subulate. Flowers bright yellow, in a very long, dense, whorled spike, the blossoms shortly stalked; pedicels with a lanceolate, keeled, persistent bract; calyx without bracteoles at the sinuses, both lips entire; upper one scarious, lower one twice as long; pod villous; seeds nearly white, smooth, compressed, or somewhat doubly convex, and easily distinguishable by their form and colour from any others which we have seen. A fine and distinct species, of rather coarse habit and foliage, but well deserving cultivation, and requiring only the treatment of other annual species. Native of California, and introduced to this country under the name of L. sulphureus. It is the L. sulphureus superbus of some of the German seed lists.

L. Moritzianus (Moritz's Lupine).—Stem two feet high, erect, branched, stained with reddish-purple, almost smooth, somewhat angular upwards. Leaves of five to seven lanceolate leaflets, dark green and smooth above; paler beneath, with a few long adpressed hairs; stipules subulate, purplish. Flowers in a long raceme, imperfectly whorled, as large as in Hartwegii; pedicels with a short membranous, caducous bract at the base; calyx with two minute bracteoles at side, both lips entire, lower one keeled, ovate-acuminate, upper petal at first yellow in the centre, white at margin, and blue at side, the centre changing to reddish-purple, as in the other species; lateral petal or alæ, light blue shaded; keel whitish tipped with black; pod silky, many seeded. Blooms July to September. Ordinary soil. From California. This is a very desirable species for the borders, and is indeed one of the best of the taller Lupines. It occurs in some seed lists under the strange name of L. monogynia! We believe this species to be the parent of the L. Dunnettii superbus, and L. hybridus insignis, two showy varieties of recent introduction. The latter is a late blooming species, with reddish-purple flowers; the former resembles the parent very strongly, upon which it is an improvement, but our notes of it being mislaid, we are unable to give an exact description of it. Both the varieties named may be recommended as good additions to our border annuals.

P. rugata, var. *glauca* (Wrinkled-scaled Podolepis, glacous variety).—Stems about one foot high, rigid, glaucous, and perfectly smooth, branched to the base. Leaves alternate, half stem-clasping, linear-spathulate to linear-acuminate; entire, pale green, glaucous, the margins a little revolute, obscurely three-nerved, a character best seen in the lowest and broadest leaves. Flower-

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heads bright yellow, one and a-half inches across, or more in fine specimens, on long and erect peduncles; involucrum turbinate, the scales ovate-oblong, wrinkled, with a narrow green claw or stalk, beset with glands; florets of ray female, narrowly wedge-shaped, three-cleft, spreading or somewhat revolute; florets of disk tubular, five-cleft, their summits diverging outwards; pappus as in preceding species; ovary four-angled, studded with shining white points; receptacle flat, naked. Blooms August to October. Sandy-loam and leaf-mould. This is a very desirable half-hardy annual, differing only in its smooth, glaucous character from the true rugata, which has its leaves somewhat cottony, as in acuminata. It is commonly sold for the P. auriculata.

Tropæolum majus nanum, var. *Tom Thumb*.—The plant introduced to cultivation under this name proves to be a useful addition to the numerous varieties of this popular genus. In habit it is very compact, each plant assuming a somewhat globular form, and bearing a profusion of orange-scarlet blossoms, which are well displayed above the rather small foliage, and produced to a late period of the autumn. Like all the nasturtiums, it requires a poor dry soil to develop in perfection its characteristics, and would probably succeed well in large pots. Its colour, though termed scarlet, is decidedly an orange-scarlet, having in some cases a tinge of vermilion. The yellow variety we have not seen.

Convolvulus tricolor splendens.—This fine variety of the well-known Minor Convolvulus, differs from all others by its peculiar deep reddish-purple hue, approaching puce colour. It has erroneously been supposed to be identical with the older variety known as grandiflorus, and also as "new dark," a mistake probably attributable to its occasional inconstancy.

[It is seldom our good fortune to meet with so candid and just opinions as are expressed in the above few extracts, which are taken from a supplement to the "Book of Annuals" by Mr. Thompson, of Ipswich. Mr. T. must have taken great pains and much labour to arrive at so accurate a conclusion. We can, in every case where we have grown the variety, endorse the opinions here expressed, which for candour are unquestionable, and would recommend an earnest perusal.]

NOTES AND QUERIES.

[We shall feel obliged by any Correspondent or Subscriber forwarding answers to any of the following queries.]

TULIP NOTES.—Mr. Hepworth writes us, that he has not forgotten

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the "Midland Florist," but wishes to state, that his reason for not sending us lists of Select Florists' Flowers is simply because he says the blooming season is at hand, when he intends to visit some of the principal collections, especially of new broken flowers. Mr. Hepworth suggests that Mr. Allestree, or some other gentleman, a competent judge of what a tulip should be, should accompany him, to assist in comparing and taking notes. Mr. Hepworth promises, after the national show, to give us a long chapter and correct notes of such flowers as approach the standard, impartially, and expresses his opinion that this would be of very important service, and would be very acceptable to the majority of readers. Mr. H. expresses his willingness to give opinion on auriculas, tulips, polyanthuses, pinks, picotees, and carnations; but wishes a stamped envelope to be sent, with correct address. Mr. H. will also answer any queries, and give advice on these flowers through the pages of the "Midland Florist."—[Did it ever strike Mr. Allestree, or Mr. Hepworth, the great use a complete list of tulips, with descriptions and aliases, would be to amateurs? The work, to one so well acquainted as either of our friends are with tulips and tulip growing, would not be very difficult. Would either of them oblige us? Many notes which might be used have already appeared.—Ed.]

Mr. Conductor,—There appears to be an unaccountable hesitancy among tulip growers to give descriptive notes of their flowers. In your last number Mr. Dobson and Mr. Cranston anticipated the interest of the amateur in pelargoniums, cinerarias, and roses, while we poor amateurs in tulips must be content with naked lists of flowers, we may not, perchance, have the opportunity to see or possess for years. The Rev. S. Cresswell's list is most copious, and had he given descriptive notes, especially as most of them are new varieties, it would have been a rich study for the amateur, besides the utility for future reference, had the authors of these lists given their notes with them. To one of these flowers in Mr. Allestree's list of roses I must demur —Gibbon's, No. 1. In the first volume of the "Midland Florist," page 9, I find Gibbon's "No. 1, Surpasse le Grand, this number has never been altered, Dark Feathered Byblœmen," and some years since I had a bulb of Gibbon's No. 1, from Mr. Hammond, New Radford, which corresponds with this description. Perhaps Mr. A. can do something towards disentangling these conflicting statements.—Dura, *Market Rasen.*

Roses for Walls.—A Lady Subscriber asks for the best white rose for an east and south wall. [Acedalie is the best hardy autumnal rose of a white tendency for an east wall; Mrs. Bosanquet will do well for a south wall; Octavie Fontaine, pure white

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(untried), comes with a high character, and is adapted to a pole or wall.—W. F. RADCLYFFE.]

THE ROSES.—We have received many complaints, several from large nurserymen, of the failure of roses. We doubt not, from all accounts, that a good deal of stock has been lost.

VERBENA PEGS.—A Correspondent (Walthamstow), writing, says, in the "Midland Florist," for August, I find hair-pins recommended for verbena pegs ; but, for my part, if I could obtain them for nothing, I would not use them, as they are not strong enough. I also object to those made of zinc. Being a three years' reader, and having used pegs made of fern or brachen. These I find answer remarkably well, both for time and expense, for I cut from twelve to twenty from a single brachen.—[We have ourselves used the pegs recommended, which are the best and cheapest, although they are not obtainable in all localities.—ED.]

Will you be kind enough to give me the names of the three best (and cheap) variegated geraniums?—A NEW SUBSCRIBER. [The three best oldish variegated geraniums are Golden Chain, Flower of the Day, and Mangles' Pink. We think these might be had, if ordered at once, to arrive at the time of bedding out, without pots, at four shillings per dozen. But who would plant them alone in a bed? The Golden Chain and Flower of the Day are both beautiful, if each have mixed with them in a bed the Lobelia erinus speciosa, blue, easily raised from seed, or each bed edged with the blue lobelia; and as for Mangles', it might be the Royal geranium. At the Crystal Palace they had, last year, as many, if planted in a line, as would be miles in length. It makes a charming bed, mixed with the good old Verbena venosa, rose purple, or the Purple King verbena; or, if economy be an object, a few plants from seeds of the blue branching larkspur pegged down amongst it, taking care to keep all the seeds picked off; or what is more novel still, mix with it the dark-leaf Perilla nankinensis; peg down the shoots and pinch them in, to keep it in shape, or edge the bed with it.]

BEDDING PLANTS.—Will you kindly, in your next, give me a list of the best plants to fill twelve beds in front of a villa, to last tolerably well through the season? The beds are of irregular shapes, but generally about six feet by four.—AN AMATEUR. [The best plants for twelve beds on the lawn in front of a villa, that will last tolerably through the season, the beds irregular in shapes, but about six feet by four; and if dahlias would suit the shape of the beds and the position in regard to surrounding objects would materially alter the way in which they should be planted to be most effective. They might all be filled with hardy annuals cheap, or with the half-hardy ones, and with the half-hardy bedding plants,

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as geraniums, calceolarias, verbenas, etc.; or they might contain a mixture of bedding plants, the half-hardy annuals and hardy; and last, though not to be overlooked, the hardy perennials, such as Campanula carpatica, blue, Œnothera Missouriensis, yellow, Cerastium tomentosum, white, etc. But for such sized beds no dahlias would be suitable, except the very dwarf kinds, as Zelinda, purple, a good old sort for beds, if the plants do not get drawn when raised in heat. If we possessed a plan of your garden, and the plants you have for it, and a hint as to your purse for purchasing, we should then be in a position how to advise you. But if economy is your motto, look well into some of the good seed lists at once, and have an eye that, whether they be raised in heat or sown in the open air, they do not get drawn; arrange the colours well, and if the ground be well prepared, you may expect a reward in beauty for your trouble.]

ODDS AND ENDS.

It is well that different plants, as well as other articles, have their run of fashion, as it is the means of many being brought into notice prominently, that otherwise might be neglected. I, for one, am glad to see that the days are fast dawning, that, for a flower-garden to be beautiful, it is not necessary that all the plants should produce striking colours. In times past flower-gardens contained great variety in their mixed beds and borders. It, however, became a fashion with many, that each bed should contain plants to produce but one colour, red and yellow being predominant, and in many gardens away went to the rubbish heap many plants, rare and beautiful, and amongst them the ornamental grasses, which were considered insignificant, compared to the gay colours of the half-hardy bedding-plants. In the year 1640, John Parkinson published a work on "Plants," which mentions at that time three varieties of variegated grasses. I think it very probable that, at the present day, but few gardens can boast of having them. Possibly a few have yet the old ribbon grass, or Gardener's garters. I was pleased to read of its being patronized last year at the Royal Gardens, Kew. Others will be sure to follow the fashion, and, for the future, not exclude the ornamental grasses as being too insignificant.

Thanks to plant collectors, the list of ornamental grasses are increasing fast, from the carpet plant, Spergula pilifera, up to the giants, as the Pampas grass, Bambusas, Arundas, etc. But what about Festuca glauca, for grass verges (if not lawns) in

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well-kept gardens? Of the Gynerium argenteum, or Pampas grass, there are male and female; the latter is not so free in flowering, dwarfer in habit, and the colour of the flowers more gray than the male. The latter is grown by hundreds at the Marquis of Huntley's, Orton House, Huntingdonshire; and I have been informed in greater quantities at Martyr Castle, County Cork, and Belmont Castle, County Perth. With care the Pampas grass can easily be removed when of a large size. Mr. Ewart, the indefatigable gardener to the Earl of Westmoreland, Apethorpe Hall, Northamptonshire, in 1858, removed one that had that season borne forty fine spikes; in the following year it produced sixty, still finer. It was planted in a well-prepared compost of rich earth, on a raised mound of old roots of trees, at the end of the flower-garden, which is bounded on each side by large old yew trees. At a distance, when the Pampas grass was in bloom, it was compared to a fountain of water, the plumes of flowers and the foliage appeared to so great an advantage on an elevated position.

To those who are about increasing their stock, now is the time to sow or divide old plants, carefully cutting them in pieces with a sharp knife, and plant in sandy compost, in a cold frame, at least eighteen inches from the glass, to remain until they have made nice growth, then plant where they are to grow, or into the reserve ground. I have just divided six Belgian plants into one hundred, all male plants.

In the Arundas there is a strong-growing one, called Donax, and which I consider a handsome variegated variety, Donax versicolor, in habit taller and broader in leaf than the old Arunda ribbon grass. But taller still are Bambusa metake and gracilis, with plain leaves, all hardy; and also many others, besides the biennial and annual sorts, which can be purchased of any respectable seedsman at a small outlay. I would say to all admirers of the beautiful and elegant, do not forget the grasses, but bear in mind that most of them will not succeed well if the ground is not well prepared.

In addition to the beautiful grasses, there are many grass-like plants gaining favour, such as the grand Tritomas, media, uvaria, Burchelii, Rooperii, and others; and there are also the Tritonias, aurea as yet the most commonly grown. But the Tritomas cannot fail in gaining the admiration with the many, if well grown. The make-shift systems will not do. The ground must be well prepared, and, through the months of June and July, receive abundance of water. There are other plants in habits bordering on the above, as the hardy yuccas, the half-hardy cannas, etc., etc., and all of easy culture, and fine ornaments to a garden, if justice be done to them in preparing the ground well for them. J. K.

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WORK TO BE DONE—APRIL.

Auriculas.—Plants must be protected from frost, and when in bloom must be shaded, giving the morning air and sun. Without the free admission of the former your plants will suffer. Stir up the surface of the soil. Thin out any pips.

Carnations and Picotees.—Any requiring it should be at once placed in their proper blooming pots, using the compost previously recommended. This is also one of the best times for planting out beds, which should be raised above the level of the path, by means of a board, about four inches high, being placed all round.

Cinerarias.—These will require a good bit of attention, when required for exhibition, in training the flower-stems, as they grow. The green-fly will also be very busy, therefore fumigate once a week, in light doses; this will keep the fly away in a great measure. At this season of the year the plants must be well looked after. See that they do not want water. Keep the plants clean at all times. On bright days give a little shading; this will prolong their beauty and bring up the colours.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Fuchsias.—Shift at once the early blooming plants into their blooming pots, giving them a rich soil; occasionally syringe them overhead. When they are established in these pots some manure-water may be given. The succession plants may also be shifted, and kept in a growing state; they must not receive any check, or they will at once commence to flower. Air may be given at favourable opportunities, but in doing so be guided by the atmosphere outside, and do not give it on the plant. Cuttings may be put in for late flowering; they will strike very freely at this season, and will make excellent stuff for blooming late. Attend to the striking of any plants that require it, and carefully watch for the green-fly. The following are superior to any others we have seen:—Chancellor, Crown Jewel, Duchess of Lancester, Eclat, Guiding Star, La Crinoline, Prince Frederick William of Prussia, Princess of Prussia, Rose of Castille, Sir Colin Campbell, Souvenir de Chiswick, The Fair Oriana.—JOHN DOBSON.

Greenhouse.—In this department plants will be making rapid growth, and must have plenty of light and air. Towards the end of the month some of the most hardy may be removed to the open ground, which will allow of more room being given to the choice and tender varieties. Some correas, for early flowering, should receive a shift. Still fumigate, especially the calceolarias, which will now be throwing up their spikes of flowers, and will require sticks and tying. The plants will require a little shade on hot days. Dead leaves must have no quarter; stir up the soil and

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syringe early in the afternoon. Cuttings of scarlet pelargoniums struck now, will flower through the winter. Cuttings of a great many things may be taken which will strike readily. The greenhouse will now be gay, with azalea Indica, camellias, cinerarias, salvias, boronia pinnata, hoveas, acacias, chorozemas, daphnes, etc.

Pansies.—Favourable weather will make these grow during April with great luxuriance, and will reqiure much attention every day, or rather morning, to stop the ravages of slugs, who will be very busy on mild, damp mornings; these should be trapped in the ordinary way and killed. Those out of doors will require particular attention in this respect, otherwise the flowers will be so disfigured, that if blooms are wanted, they will be spoilt. Those in frames are not so likely to be attacked, but these must be watched. Manure-water should be given to those in pots, and should consist of cow-dung and sheep-dung, in equal proportions, and a little soot; these should be well stirred up together, and then let it settle. A little judgment must be exercised in applying it, as it should not be too strong at the first. An occasional shower allowed over the plants will greatly assist them. The lights should be allowed to remain off all day, and be tilted at night. Seedlings should be bedded out without delay.—JOHN DOBSON.

Pelargoniums.—These will now be fast throwing up their trusses, and many will be in flower by the end of the month; preparations should, therefore, be made for the shading, and especially if the house is glazed with sheet-glass; this will help very materially to prolong their beauty. About the first or second week in the month, and before the plants show colour, they should be well fumigated two nights in succession, and the following morning must be well washed with a syringe, using rain water for the purpose. A very marked improvement will be observed in the plants in a day or two after this has been done. It greatly assists them in throwing up their bloom; the preceding remarks apply to the May plants. Late plants will require to be tied out and kept close the glass, and allowed plenty of room to grow, while a few for very late bloom may be finally shifted.—JOHN DOBSON.

Tulips.—Protection must still be afforded from frost and heavy rains, but do not cover unnecessarily, removing also on every opportunity. Keep your beds clear of weeds, and stir the surface soil between your rows with a blunt stick, taking care not to injure the bulbs. Towards the last day of the month choose a fine evening and give a liberal watering, covering up close. This cleans the foliage, and gives them a healthy appearance. Full particulars of the National Exhibition are to be found at another page.

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A FEW GOOD PLUMS.

THE cultivation of fruits is most important, and I shall be most happy to see the subject taken up efficiently by any of our horticulturists. I remember, when down in the neighbourhood of Nottingham, having great pleasure in meeting and conversing with my old friend, Mr. Haythorn—and there are few men who know more about the relative values of fruit—and I had hoped ere this that he would have kindly given us a list of the best apples, with a short description of the varieties. I am myself a grower of the plum, to which for many years I have paid considerable attention; and I have written out a list of such varieties as either have been grown by myself, or else I have had the pleasure of inspecting at the meetings of the British Pomological Society and at the fruit committee of the Horticultural Society of London:—

Early Prolific.—This is a well-known and exceedingly useful variety. In 1856, when the crops of plums were so great a failure, this variety bore a prolific crop; and this character is generally sustained, bearing even while other sorts are total failures. In some soils in the midland counties the fruit is very tasteless, but, generally speaking, it is a plum well worth cultivation.

Early Touraine, or, as I believe it is more properly termed, Precoce de Tours, is an early variety. The fruit is not large; purple, and of a roundish oval form. As a wall-fruit it is invaluable, although there are several standard specimens in the midland counties. These yield a crop about once in four years.

Sainte Etrenne, although little grown in this part, is an excellent variety, and should be looked after; it is early. Mr. Rivers thinks it to be a seedling of Jaune Hative. Yellow, and generally spotted with red.

Denniston's Superb.—This is one of the greengage class, although earlier; it is of a greenish yellow, partaking considerably of the qualities of the greengage. It is, however, unsuitable for light lands. Here, on a stiff soil, I have it to perfection.

Belgian Purple is a good-flavoured plum, of a middling size, and good cropper; generally grown on a wall. Takes some time to ripen, but when fully matured is a good dessert plum, though it is well adapted for culinary purposes.

Peach Plum, recommended by Mr. Rivers at one of the meetings of the Pomological Society, "is a fine red, very handsome, and a great bearer; its flavour is not quite viscous enough, as it is,

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when fully ripe, too sweet. I first saw this plum in the market of St. Malo, July 20, 1842, and was much struck with its beauty; it ripens in England about the last week in August."

The Jefferson Plum is of American extraction, and really an excellent variety; does well as a standard or as a wall-fruit; with me, however, best as the latter, on a south-eastern aspect; colour, deep yellow, with red patches.

Angelina Burdett.—Another useful plum; does well with me in a sheltered situation as a pyramid, although to all north I would advise a south-eastern wall. A round fruit, of middling size, dark in colour; worth possessing.

Coe's Red.—A late plum, of good dessert qualities, good flavour, and requires a wall when possible.

Coe's Golden Drop is too tender for us midlanders; it is, however, a splendid fruit for an orchard-house, in which state I have repeatedly seen and tasted it; it is exceedingly rich and desirable.

Dolphin is a good old sort, catalogued frequently as "Victoria." I believe this plum to be of French origin, but for household purposes it cannot be beaten.

Diamond.—Another good culinary plum; a large variety of the muscle species; as a dessert plum totally worthless, but for preserving exceedingly fine; with me it is perfectly hardy.

Dark Orleans, or, as I believe, it is better known in the south as the Late Orleans, is a purple plum, roundish, and good in quality. The pyramid with me is perfectly hardy.

Kirke's Plum is hardy, and is worthy of general cultivation. It is a free bearer, and possesses both dessert and culinary properties; as a standard and pyramid it succeeds perfectly.

Victoria (Deny's).—I have only, I am sorry to say, just added this. It is invariably reported as a good bearer in all situations. A useful kitchen and table fruit.

Greengage.—Of these there are several varieties, too well known to need description. Mr. Cant has raised a very nice thing in this class, but I have not as yet grown it, although I am given to understand it is perfectly hardy. Guthrie's Late is also another useful variety.

Royal Hative, of a good amber colour, rich, ripe in August; good qualities.

White Mogul, or White Magnum Bonum; colour pale yellow; fruit large, oval, and a moderately good bearer.

The following have been given by one of the first horticulturists of the day as the sorts most suitable for small collections:—

For a Garden of Limited Extent.—Royal Hative, Drap d'Or, Greengage, Kirke's Plum, Washington, Coe's Golden Drop,

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Early Orleans, Shropshire Damson, Coe's Red, and White Magnum Bonum.

For a very Small Garden.—Royal Hative, Greengage, Coe's Golden Drop, Purple Gage, and Orleans.

For a Cottage Garden.—Royal Hative, Greengage, Coe's Golden Drop, and Reine Claude Voolet, for eating; Shropshire Damson, Winesour, and White Magnum Bonum, for cooking.

Hoping some other friend will continue our lists of fruit, which I am sure will be received with interest, I am,

A Midland Horticulturist.

Nottingham, April 4th, 1860.

A FEW WORDS FROM THE OTHER SIDE OF THE ATLANTIC,

IN A LETTER ADDRESSED TO THE REV. W. F. RADCLYFFE.

Rev. Sir,—Your very kind letter came to hand the 11th February. It has remained unanswered longer than I had intended, owing at this time to a severe press of business. Our southern orders have to be got off first, as everything there is in full bloom in the sunny south, while here it is freezing hard enough in one night to make ice half an inch thick. This has been a very hard winter upon vegetation out in the open ground. The roses are all killed to the ground; hence the great outcry about budded roses. All the top is killed, while those on their own roots are pushing again from the bottom, and likewise those planted between the collar of the bud, which, for our climate, is the only true way, when budded.

With regard to the rose "America," one word. I was in Washington city about two weeks ago, and saw it in bloom; it is a greatly improved Gloire de Dijon, and requires to be well grown, and then you may say it is never out of bloom. It is a very rapid grower, and decidedly good. The "George Peabody" is selling better than it did at first, as it is becoming known. With this I send a few opinions selected from various sections of the country, north, south, east, and west. You say truly, roses are "fickle things." I could, perhaps, show you more of their fickleness here than with you; and I have no doubt, as you say, that our ground makes wood, but yet our hot, dry summer scorches everything up, and then there are about two months that vegetation is at a stand. Nothing will then grow. I have had most of the leaves taken off

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the roses grown in pots in August, by the extreme heat. You would think at times that a sirocco blast had swept over them. Such are the inconveniences of our irregular climate; and yet it is but transitory, for in the cool evenings they soon recover. Then there is another difficulty—the hot days in the fall and the cool evenings cause roses to grow most luxuriantly, and leaves them with soft, unripened wood; and about the time that you find them in their glory, there comes a killing frost and blasts their beauty and their hardiness at the same time. The wood being unripened, is unable to withstand the frost. When the mercury gets lower down than 6°, they perish. Your tea roses are all good, but Eliza Sauvage here is like a consumptive patient. Well, the fact is, we must try and suit all tastes and all climates.

With regard to strawberries, I am but a tyro in their culture, and perhaps ought not to say too much. In what I do say I shall confine myself to facts; but, in passing along, I would say that you use the right materials for a fertilizer, and which both roses and strawberries want. I have great faith in bones as a substantial manure, giving off their phosphates gradually. I have always found that for strawberries you cannot have the ground too deep or rich. The fact is, strawberries here are never properly treated. People here are satisfied with anything that will fill up the measure with as little trouble as possible; yet there is no crop that pays better. It is quite astonishing the number of plants that are sold; yet the strawberry, like the rose, which will do well in one place, will do nothing in another. In the south the famous "Peabody" (strawberry) grows and produces wonderfully, but in the north it will not do at all. There is one good strawberry here that I know, raised by Dr. Edmundson (since dead), called Marylandica, but it is not prolific. Do you mulch? [I mulch highly, and manure all the year round. I have lost no established strawberries, and none of the early-planted runners.—W. F. R.] I have seen tan used with great advantage about two inches thick. It is absolutely necessary to mulch here in summer. Tan helps to keep down the weeds.

Now, when I come to speak of variety, their name is legion. It is a curiosity to pick up the strawberry catalogues in this country. I will only name those which in this latitude, according to my opinion, are best for all purposes:—Wilson's Albany, Hovey's seedling, M'Avoy's Superior, and Burr's New or Boston Pine. For an amateur I would recommend Marylandica, Charles's Favourite, Haarlem Orange (all three raised by Dr. Edmundson). Fillmore, a new one of the Hautbois class, is very fine here, and a prodigious bearer, and of excellent flavour. I have seen and tasted Peabody's seedling. It is a very large and fine berry, and

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does well in some localities. I consider Wilson's Albany to be A 1 for rich or poor. If you should like to have any of these, and try them yourself, it will afford me the greatest pleasure to send them. G. PENTLAND.

Baltimore, March 26th, 1860.

[P.S. Dr. Kane is like Solfaterre; Tea Cornella (? Coronella) is the one that is to supersede Devoniensis. I had lent Mr. Pentland's last letter, and hence my mistake in your April number, p. 101.—W. F. R.]

THE VEGETABLE GARDEN—MAY.

WE are liable to have a few frosty mornings in the early part of this month; it is, therefore, prudent not to be in too great a hurry to sow or plant the tender kinds of vegetables.

Peas may be sown for late crops; and, when branches can be had, the following tall sorts may be grown:—British Queen, Thurston's Reliance, Tall Mammoth, and Champion of England; dwarf sorts, that grow from two to three feet high, Hair's Dwarf Mammoth, Bedman's Imperial, and Knight's Dwarf Marrow.

Broccoli and *Cauliflower* should be sown early this month. Refer to p. 108 for the method of culture.

Cabbage and *Savoys* should also be sown. The Enfield Market Cabbage and Mitchell's Green Globe Savoy are perhaps the best.

Celery seed.—If sown early, a small plantation may be made. It requires high cultivation. Guano will be found a valuable auxiliary, in addition to stable manure; it induces rapid growth. Transplant seedlings three or four inches each way, and pinch off the tap root, and, after transplanting, water well with rain or river water.

Lettuces of sorts should be sown twice during the month; it is a good plan to sow where they are to remain, as transplanting causes them in hot weather to run up; the drill system of sowing is preferable to broadcast. Paris White Cos, Crystal Cos, Neapolitan Cabbage, Victoria, and Crystal Cabbage, are very fine sorts.

French Beans and *Scarlet Runners* should be sown for a main crop; the scarlet runner being hardier, may be sown early in the month.

Vegetable Marrows may be planted, and the second week seeds may still be sown. The Boston is an excellent marrow, and may be kept in store for winter use; the Custard Marrow is better adapted for early use.

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Salads.—Small salading may be sown once a-fortnight on rich land.

Turnips may be sown for early use, sowing only a small quantity now, as they become strong in taste; when there is no objection to colour, the Orange Jelly will be found an excellent variety.

Gherkins.—Towards the end of the month they may be sown on rich land, in drills an inch and a-half deep; drop the seeds three or four inches apart; the rows may be three feet distance; they will be up in a few days; a warm spot should be selected.

Onions.—A bed should be prepared, not too rich, as the purposes of this sowing is not to have them over-large for pickling. White Spanish or Reading Onion are good.

Carrots may be sown for a main crop on land well manured with guano and bone-dust; 5 lbs. of each to the perch.

Beet should be sown the first week in this month; if sown earlier, they become hard and woody, consequently unfit for table use. Carter's Crimson, Perkin's Black, and Cattel's Crimson, are good sorts.

Perfect cleanliness and deep cultivation will be found to assist the growth of crops materially; in thinning out, allow plenty of room. Gidney's Russian hoe is an excellent and serviceable tool to cultivate between onions, lettuce, parsley, and root crops generally; and for the future make it a practice to sow all seeds in drills. The following will be a guide; for peas the same distance between the rows as they grow in height:—

	From row to row.		From row to row.
Carrots, Early Horn.....	6 in.	Onions (according to the quality of the land)	8 to 12 in.
Do. large varieties...	12 ,,	Parsley.....	12 ,,
Parsnips.....	10 ,,	French Beans.....	18 to 24 ,,
Lettuce.....	10 ,,	* Scarlet Runners...	24 to 30 ,,
Turnip for table use.....	12 ,,		

The practice of drilling ought to be persisted in, not only for the extreme neatness, but for facility of weeding, and for regular distribution of the crops.

The Destruction of Insects.—Where slugs and snails abound, a light dusting with powdered quicklime, applied late in the evening or before sunrise, will destroy them in a few minutes; the dust will not injure vegetation; two or three applications will effectually clear a garden.

The gooseberry caterpillar will be destroyed immediately by

* These ought to be topped occasionally. The produce is greater than when grown on sticks.

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a slight dusting with white hellebore powder. It can be bought at most chemist shops, at about 1*s.* 6*d.* to 2*s.* per lb.; this will be sufficient for 200 ordinary-sized trees. Put it in a pepper-box, or small flour-dredge, and dust the trees lightly, early in the morning, before the dew is off. Observe, the caterpillar attacks the lower part of the tree first, and a timely inspection and dusting will save the tree. A shower of rain will wash off the powder, and no ill effects whatever will be produced by eating the fruit. Two or three dustings are requisite, as the butterfly lays eggs several times during summer. It is only on the caterpillar that the powder is a specific. I have tried many substances, but none so thoroughly effectual as white hellebore powder.

JAMES LEVESQUE.

Market Gardens, St Lawrence, Jersey.

CULTURE OF THE HOLLYHOCK.

THE best soil for hollyhocks is a rich loam, although they will do well, with proper management as to watering, etc., in almost every garden. Many persons suppose that, because so large, they are unsuitable for general cultivation; but here a sad mistake is made. Nothing adds more to the beauty of the garden than a few well-grown specimens.

To commence. Plants may still be procured, although by right they should have been planted in April; still, the season is backward, and therefore it is not too late. The distance apart, if planted in beds, should be not less than four feet. Choose a moderately-dry day, and if warm, a supply of water may be administered; it is also a good plan to dig over the bed before you dig the hole for the plant. Look carefully after slugs; and should the weather prove frosty, cover over with an inverted flower-pot. Here they will rapidly progress. In a short time, say six weeks after planting, carefully go over the whole of the plants, thinning out the blooming spikes which the plants will then commence throwing up. In strong plants leave three shoots, in others leave but two, while others will only bear one. Continue to water; and as they advance fix to each a stake, about three feet in height out of the ground, to which tie the shoots. In July the plants will be rapidly growing, and must be watered frequently and tied up to the stakes; and should you require fine large flowers, where three buds appear at each joint, remove two, allowing one only to remain. Water frequently during the swelling of the buds, and give occasional doses of manure-water made from sheep-dung.

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When your buds show colour, or if the spikes have attained the height of six feet, top the shoot. By this method you will insure a much more regular show of bloom. Cuttings may frequently be struck in August, and those taken off early make excellent plants —every eye will strike. Where seed is not required, cut down the plant immediately the flowers are faded; and where you are desirous of seed, take off all but one or two pods, and shorten accordingly. Protection in winter may be afforded by placing round the plants ashes or sawdust. The best time to sow seed is in August, September, or March; when large enough to handle, they may be planted out in drills in a blooming bed. If good, they should be taken care of; but if inferior to existing varieties, they should be destroyed.

To purchasers I would recommend the following, all of which may be procured at a reasonable rate:—Lizzy, Hon. Mrs. Ashley, Beauty of Cheshunt, Empress, Crusader, Memnon, Queen of Whites, Walden Masterpiece, Saturn, Purple Perfection, Lemonade Improved. COSMOPOLITE.

THE DAHLIA.

BY THE CONDUCTOR.

LATE in March, or early in April, the roots should be set to work. Those not having a greenhouse may make a hot-bed four or five feet deep, and cover over with soil, on which place the tubers, which must on no account touch the manure, or they will be almost sure to rot. Keep the crown above the soil, so as to show the eyes well, and if a quantity are wanted, when the shoots are about three inches long, they may be carefully broken off, and after being smoothed with a sharp knife at the extreme root end of the cutting, they may be potted into pots, previously prepared by filling them about one quarter with broken potsherds, and the rest with good turfy loam, with a little sand added at the top. Some writers maintain it is the best to place several cuttings in one pot, and most certainly, when a large number are required, they take up less room, but when an ordinary stock only is wanted, we should advocate single potting. If you do not want a great number of plants of each variety, the roots may be divided, which, in many cases, will be found to be a less tedious and more certain method than that of simply taking cuttings. The pots, as they become filled with roots, should be exchanged for others of a larger size, and the plant should be gradually hardened off as the

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season advances by placing them in a cold frame. A convenient way for those persons having greenhouses is to place the roots in boxes, with a little good loamy soil, when they will very soon emit shoots which may then be treated as before described.

In striking cuttings, a very successful method is to place half an inch of sand on the top of the ordinary mould, so that the cuttings can be put through the sand, and only just touch the soil; they will then be found to strike root with much greater freedom than when they are without the sand. We will suppose that the amateur has got thus far, and the result is nice, dwarfy, bushy plants, about nine inches in length, of a healthy, vigorous, and compact habit. The next operation will, therefore, be—

Planting Out.—But, before we proceed in this department, we must give some little direction as to the soil. We should, therefore, advocate, as the best, good hazel loam, but when this is not to be had, get the best part of the garden. In February or March, lay a good coating of stable-dung on the surface. After this has lain a week or ten days, dig it in fully a spit deep. The stakes should be about six feet long, and the hole having been dug out when you wish to plant your dahlias. About five or six feet apart the stakes may be driven down, and if regulated by the garden line, they will look very much better. This adds greatly to the beauty of your bed.

It is difficult to fix any precise date, but all danger should be over before any attempt is made. The middle of May may generally be time. The stakes being fixed, the plants must be taken on to the ground, and after being turned out of the pots, must be placed close to the stake; the earth pressed firmly down, and a small tie of bast will keep the plant in its place. Of course, when the plants are grown for ornament merely, a great deal depends on the proper disposal of colours; and as so much depends on taste, we must leave the subject in the hands of the reader, merely remarking that all the show in a bed of dahlias consists in its diversity. Nothing takes away from the beauty of the bed more than all one end being dark, and perhaps all the other end being light; and when mixed, scarcely anything exceeds the show made by a well-arranged and well-kept bed of dahlias.

HERBACEOUS PLANTS.

Few persons appreciate herbaceous plants as they ought, considering their desirable qualities as ornaments of the garden. I have been, and am still, a great admirer of the whole class, and have given a list

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of such as I have myself cultivated. The question as to what is an herbaceous plant? may, perhaps, be asked by some of your readers. Plants which throw up their stems annually are termed herbaceous; and although in their native climes some of the following would not be properly classed as herbaceous, still the fact of their dying down and shooting the following spring will warrant me in placing them on my list:—

ACONITUM.—Of these there is the var. *chinensis*, well known, and an inhabitant for many years of the flower-border. The flowers are blue and white, its height is about eighteen inches; flowers from August till November. *Varigatum novum.*—This is another fine variety, taller, reaching thirty inches. The flowers are variegated blue and white; this flowers about the same time as the previous one. There are many other varieties, some of which are worthy of a place, but these two are the best in the class. This is a family of plants frequently, and very properly, excluded from the English garden on account of its deadly poison.

ANEMONE JAPONICA.—This plant is peculiarly adapted for the border of a shrubbery. The colour is a pinky-purple, the height about eighteen inches. Although introduced from Japan, it is perfectly hardy, and was one of those novelties for which we are indebted to Mr. Fortune. The soil most suitable is light, but not too dry. Propagation by division of the root. *A. elegans* is another variety from the same country, quite hardy, but still scarcely equal to A. Japonica.

ALYSSUM.—Of these I have several. *A. saxatile variegata* is very pretty, and I find it extremely useful as a rock-work ornament. The flowers are of a very bright yellow; dwarf.

ANTIRRHINUM.—This is a numerous tribe of plants, preferring a loamy soil, and will grow well in and about walls; propagation by seed, but named or choice varieties are best raised by cuttings, seedlings being inconstant. For bedding purposes I have used—*A. Hendersoni*, a dwarf, compact variety, white, with carmine stripes, very fine; *A. Alma*, light ground, with stripes and flakes of deep crimson; *Conqueror*, rose and white; *John Downie*, white tube, with rosy crimson lip; *White Swan*, the best white in cultivation; *General Simpson*, a handsome flower, forming a good spike, it is a yellow-ground flower, prettily varied; *Firefly*, a showy variety, white and scarlet; *Royal Scarlet*, a fine bold flower, deep scarlet marks, a beautiful spike.

AQUILEGIA.—The Aquilegia is a very old favourite; there are many varieties; colours white, red, pink, purple, selfs, striped and shaded, single and double; ordinary garden culture only is requisite. *A. glandulosa* and *A. striatum* are, perhaps, the best in the

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class. The flowers of the first are blue and white, and its height is about eighteen inches. Seed freely, although the seedlings are very inconstant.

ANTHERICUM LILIASTRUM.—A splendid acquisition; very neat and pretty in height, colour pure white.

AURICULA.—These are not to be compared with the auriculas in general cultivation as florists' flowers; the border varieties are very useful, require a shady situation and ordinary soil; propagate by division; commonly called *Bear's Ears*.

ACONITE HYEMALIS.—This is generally termed the Winter Aconite, and comes under the denomination of a tuberous flower; colour bright yellow, very dwarf, and flowers very early, even before the snowdrop. It requires a moist, shady situation; and if left without being disturbed for several years, flowers more plentifully than it otherwise would do.

ANEMONE.—The cultivation of this, even as a border flower, may be precisely the same as that given in one of the earlier numbers of the present year; it, therefore, only requires to be mentioned in my list.

CAMPANULA.—A most useful tribe, requiring ordinary culture; propagation by offsets or seeds. *C. coronata* is one of the best; colour white, height about two feet. *C. speciosa* is another remarkably good variety; its height is about eighteen inches, the flowers rising at the summit of the stem; colour bright purple, blooms from August to October. *C. carpatica*, another useful variety; flowers earlier, and lasts a considerable time; colour blue. The *Canterbury Bell* is of this species, and is too well known to need description. *C. pyramidalis* grows to an enormous height, and may be trained into fantastic shapes. This variety, however, succeeds best as a pot-plant, but may be safely recommended as desirable where room can be given.

CARNATION.—Among border varieties the old clove carnation, on account of its fragrance, will always command a place. Almost any ordinary soil will be suitable; propagation as other varieties, particulars of which have already been given.

CHELONE COCCINEA.—This is a plant which is well worth possessing. The colour is scarlet, and the flowers are of a horn shape, similar to the pentstemon; height about eighteen inches. *C. Mexicana splendens* is also very pretty, of a scarlet colour, and should be in every collection. *C. barbata*, very similar to *C. coccinea*, is also another good variety.

CALCEOLARIAS.—The herbaceous varieties ranking, as they do, among florists' flowers, I would simply notice the shrubby varieties. These, as ornaments for the parterres, where the bedding-out system is adopted, are invaluable. They may be treated as

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ordinary bedding plants; propagation by cuttings, which will strike readily. As specimens for conservatories, few plants are more applicable or capable of being turned to better account; and I have at this moment one blowing in my greenhouse more than a yard across, loaded with flowers. This is the effect of treatment described by Mr. Dobson in the "Midland Florist," some two years ago, before which I had no idea that it would make such a noble appearance. The best sorts for bedding purposes are Aurea floribunda (North), Albina (Cole), Gem (Cole), Hawk (Cole), Orange Perfection (Cole), Clown (Cole), General Canrobert (Henderson), Hebe (Cole), Indispensable (Cole), Palida (Cole), Tamberlik (Cole), King of Yellows (Cole), Queen of Yellows (Cole), Rubra (Cole), Snowflake (Cole), Eclipse (Cole), King of Sardinia (Cole), Lady Grenville (Cole).

Chrysanthemums.—These are of easy garden culture; propagation by division of the roots in early spring, by cuttings in April and May, or by layering. The culture of the chrysanthemum, together with a list of the best out-door sorts, has already been given by Mr. S. Broome, the well-known cultivator at the Temple.

Coreopsis.—*C. lanceolata* is a pretty thing in the class of herbaceous plants, flowering freely for several months; colour bright yellow, height two feet six inches.

Christmas Rose.—This, called by botanists *Helleborus niger*, is one of our handsomest winter flowers; colour white, tipped with pink, its splendid dark foliage being in striking contrast. Quite hardy, although in winter a little protection may be necessary to preserve its flowers. The compost it grows naturally in is a light loam, but ordinary garden soil is quite sufficient; propagation by division of the root.

A Lover of Herbaceous Plants.

(*To be continued.*)

PELARGONIUMS—MAY.

Of all the plants grown for summer decoration nothing can equal this class of plants, whether we look at its varied and almost unlimited shades of colour, or its long duration; while in a growing state, too, it is quite as interesting, and its admirers increase, if we may judge from the extraordinary number of plants which are annually supplied from different sources. Yet, with all this, how seldom do we see in the amateur's possession such plants as might

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be grown even with only ordinary care. This we may trace from various causes—over attention over potting, not keeping the green-fly out of the house, too little or too much air, etc. I think the taste for the geranium or any other plant might, and would be, improved, by offering prizes at our metropolitan and provincial shows each season to amateurs, who have never before taken a prize The cultivation of this plant is the most simple; and those who do not succeed in it cannot say it is hard to grow; to prove which a reference to former calendars will be sufficient. There is nothing recommended which cannot be understood; and these plain, simple directions are carried out by us to the letter. The preceding remarks, although diverging from the calendar of operations, are given with the hope of inducing many amateurs to become growers of this class of plants. But to proceed to work to be done. This is a busy month with exhibitors, and, to those unacquainted with plant-growing, it is a matter of surprise how they can be got to such perfection to the day. Many exhibitions are fixed late in the month; the plants will, therefore, be better allowed to come in their own time. On bright sunny days the plants must be shaded for a few hours. See also that the plants are not allowed to get quite dry, or it will throw them out. Let a free circulation of air be allowed round the plants, but carefully avoid the wind blowing on them and cold draughts, and keep the ground or paths round the house damped down to prevent the dust blowing over them. Bees must be effectually excluded, or in a few hours a scene of destruction will present itself. When seed is required, this will not be necessary. Keep late plants growing and tied out.

JOHN DOBSON.

Woodlands Nursery, Isleworth.

BOUGAINVILLEA SPECTABILIS.

THIS beautiful exotic, from South America, has been in its meridian of beauty the last six weeks, at the residence of Thomas Foster, Esq., of this town, being the third year of its blooming there. It is a lovely object, with its rich clusters of soft rosy-purple, or mauve colour, thickly studding the plant. It is a deciduous shrub, partaking of a climbing habit, indigenous to the warmer latitudes, and requiring a temperature ranging up to 75° for its successful culture. The true flowers are very inconspicuous, being an elongated tube of a dull red colour; but its elegance and beauty are charmingly developed in its clusters of floral leaves, or bracteas, three of which enclose one or more of the true flowers

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making it a most desirable plant for the conservatory or warm greenhouse. It first bloomed in England, in the Conservatory at Chatsworth, in 1844; and since that time other specimens have developed their charming masses of beauty. It is not confined to one colour only; for the plant at Chatsworth bloomed a deep purple, and others have been orange, bright-red, rose, and even quite green; but all are considered as mere varieties of one decided species. The plant may still be considered rare, consequent probably upon the difficulty of its propagation, various means having here been resorted to without success. A hint on this point would prove acceptable. J. B.

Mansfield, March 29th.

FUCHSIAS—MAY.

See that the plants have every attention in tying up any shoots that may not be strong enough to support themselves; because, if a plant loses only one of its shoots, the beauty and gracefulness of it is very much lessened. As the plants will be growing fast, see that liberal waterings are given; as the plants delight in moisture, they should be syringed once or twice a-day until the blooms begin to burst. Plants for blooming in the autumn should receive their final shift, and be kept growing and well stopped back, by which means large and handsome bushy plants may be obtained. A most essential thing in the growing of specimens or young plants is the plants being allowed plenty of room; this is absolutely necessary in the growing time, otherwise the plants make a long and weak growth and small blooms. Nice young plants for flowering in the autumn may be made by putting the cuttings in any time in the month. Shade all plants during a great part of the day, if sunny.

Woodlands Nursery, Isleworth. John Dobson.

CINERARIAS—MAY.

Seed-savers will be busy this month. We hope our advice previously given has been acted upon, and the seed saved from none but first-rate flowers; if all try, the sooner we shall reach perfection. Some very fine seedlings have come under our notice this season; but as I intend to make them a matter of special comment after the season is over, it is unnecessary for me to enumerate them here. When plants are in flower, if the beauty is required

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or some time, the bees must be excluded, and the plants should be removed to a house having a north aspect. Liberal watering will also be necessary. Regulating and tying out the flower-stems as they grow must also be attended to, so that the plants may be as well formed as possible when in full flower. To secure many of the varieties lose no time in taking off a few of the side-shoots when it can be done, and put them into some small pots to strike, placing them under a close hand-light. These plants will be found very useful for stock. Sow seed during the month.

JOHN DOBSON.

Woodlands Nursery, Isleworth.

PANSIES—MAY.

THE present spring appears a very backward one, and scarcely a pansy bloom is to be seen out of doors. Those in pots or frames, however, are very gay, and rewarding us for the trouble and anxiety of the winter, which has been a long one. The plants should have manure-water often, and receive plenty of air, and should be slightly shaded during the hotter part of the day. Prevent as much as possible dust getting into the blooms (to which it adheres), by well watering for some yards round the frame. If cut blooms are required, reduce the number of flowers by pinching them off; but if for showing in pots, this need not be done. The side-shoots, if more than required to flower, may be taken off and put into some small pots or in a border; in either case, place them in a shady situation. Plants in beds have been much injured by the late high winds, unless constantly looked over and pegged down and top-dressed. We may expect some very fine late blooms from those out of doors this season. If the weather is dry, give copious waterings in the evening. Sow seed and prick out seedlings.

Woodlands Nursery, Isleworth. JOHN DOBSON.

CELERY.

THE following is the opinion of the Committee of the Horticultural Society on the Celery grown last year in the Experimental Gardens of the Society:—

"A collection of fifteen samples of celery was cultivated for comparative trial at the garden in 1859, and various notes and memoranda concerning the peculiarities of the varieties, as well as

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their quality, were made; but the unusually severe and early autumnal frost injured the plants so much that these memoranda could not be satisfactorily completed. It has accordingly been thought desirable to submit a more complete collection to a fuller examination during the present season.

"It may, however, be stated, that so far as the examination was carried, it was found that the variety sent as Ivery's Ne plus ultra, by which name it appears that Ivery's Nonsuch was intended, and another called Hood's Dwarf Red, were the two best of the red kinds, both these being of very excellent quality; and that a dwarf variety, sent under the names of Superb Dwarf White, and Incomparable Dwarf White, was the best of the white kinds. This latter closely resembles the Céleri Court Hâtif of the French."

NOTES ON FRUITS.

(*From the Horticultural Society's Proceedings.*)

PEARS.

Mr. Smith's sample of Joséphine de Malines was grown on a standard tree. The subsoil was sand and clay. The fruit were rather below the usual size, but in excellent condition, being very melting, juicy, rich, and sugary, but nevertheless not of so rich a flavour as this variety frequently acquires.

The Old Colmar, from Mr. Moorman, were grown at Bexhill, Sussex, under the conditions stated at p. 123 of the "Proceedings." The tree, grafted on the pear stock, is eight years old, and vigorous, growing against a south-west wall about twenty feet high; it is trained horizontally, and pruned in the usual way. The season is generally late. The fruit was of good size, and well-grown; the flesh was crisp, and very juicy and sugary, but was not so richly flavoured as this variety frequently becomes.

The Joséphine de Malines, from Mr. Spivey, were grown in a low and damp situation, the surface having an inclination to the south. The soil is two feet deep, of good garden-mould, and the subsoil loamy clay, drained four feet deep. The tree, grafted on a quince stock, is ten years old, very clean and healthy, eight feet high, and trained against a south wall; it was root-pruned in November, 1858, and the branches are pruned on the close-spur system. The last season was very dry. These specimens were large, smooth-skinned, and very handsome; the flesh tender, buttery, and melting, with the fine salmon tinge peculiar to this variety; but the flavour was decidedly inferior to that of Mr. Smith's specimens.

The Easter Beurré, from Mr. Moorman, had been grown at

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Clapham Road, about three miles on the south side of London, subject to the usual London climate. The soil is of good garden-mould, two and a-half feet deep, and the subsoil gravel; the surface is level. The tree is a standard, about eighteen years old, of vigorous habit, and grafted on the pear stock; it is trained downwards, and pruned in the usual way. The fruit was of medium size, in excellent keeping condition, very much covered with thin brown russet; the flesh was quite melting, very juicy, with a pleasant briskness, but not rich in flavour.

The Easter Beurré, from Mr. A. Ingram, were grown at Highgrove, which is considerably elevated, and much exposed to east and west. The soil is a strong garden loam, twenty-two inches deep, and the subsoil gravelly clay, well drained; the surface slopes a little to the west. The tree is against a west wall, about ten feet high, and though old is in good condition, and always bears well; it is pruned in the usual way. Mr. Ingram stated that he always left Easter Beurré pears to hang on the tree as long as they were safe from frost. Those exhibited were gathered on October 19th; they were very large, handsome, but not in such good keeping condition as those from Mr. Moorman, neither were they so juicy; their season had evidently passed, so that they had become mealy, but they had, nevertheless, more richness of flavour than those from Mr. Moorman.

OTHER PEARS.

From Mr. J. B. Whiting, gardener to H. T. Hope, Esq., F.H.S., the Deepdene, near Dorking: Beurré Bretonneau, and Vauquelin. Beurré Bretonneau is generally a very late pear, ripening (when it does ripen) in May, but is very rarely to be met with in a melting state. Mr. Whiting's specimens were unusually fine, both in regard to size and flavour, and they were, moreover, perfectly melting, and had acquired a high flavour for that variety. The Vauquelin was produced, as Mr. Whiting stated, to show its utter worthlessness.

APPLES.

The Lamb Abbey Pearmain, from Mr. Smith, was very inferior in flavour, as also was the Wheeler's Russet. The Court-pendu Plat was superior to the preceding, but still defective, as was the Ribston Pippin. The Wyken Pippen was tolerably well flavoured; but all were inferior to the Court of Wick, exhibited by Mr. Gadd, under the name of Golden Harvey, and to the Mickleham Pearmain, from Messrs. Ivery. Respecting this latter, Mr. Whiting sent the following note:—"An apple having been exhibited at a late meeting by Messrs. Ivery, of Dorking, under the name of

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Mickleham Pearmain, I think it advisable to apprise the Committee that this is only a provincial one, which appears to have originated in the following manner:—About forty-seven years ago, a gardener named Skeet took an inn, called the Running Horse, at Mickleham; and this apple, it is believed, was found growing in the garden there, and was propagated and distributed by him. From this circumstance it was called by some Skeet's Pearmain, and by others Mickleham Pearmain. I am informed it is sometimes called Claygate Pearmain. Two distinct varieties of Pearmain are cultivated in this neighbourhood, one of them being known by one or other of the above names, the other by that of Traveller Pearmain. I am disposed to think Mr. Ivery's apple is the one known here as Traveller Pearmain, but at present I have not the means of ascertaining the fact."

KEEPING FRUIT.

In the following letter, accompanying some fruit of the Winter Nelis Pear, sent to the meeting of the Horticultural Society, Mr. Tillery, of Welbeck, recommended bran for the purpose of keeping and packing fruit. He writes:—

"I find bran the best of all substances for packing late apples and pears in shallow boxes. They want no care afterwards, as all sweating and decay are dried up. When sand is used in jars and boxes, it is usually too wet or too dry, and particles are left on the fruit about the eyes and stalks. I have no hesitation in saying, that by keeping the following varieties of late pears and apples packed in bran, I shall be able to supply dishes of those fruits for the dessert all the year round.

"*Late Pears.*—Easter Beurré, Doyenné d'Hiver Nouveau, Joséphine de Malines, Bergamotte d'Esperen, Winter Nelis, Ne Plus Mouris, Zéphirin Grégoire, Beurré de Rance, Prince Albert, Léon le Clerc de Laval.

"*Late Apples.*—Bess Pool, Court-pendu Plat, Keddleston Pippin, Cox's Orange Pippin, Ribston Pippin, Reinette du Canada, Fearn's Pippin, Sturmer Pippin, Holbert's Victoria.

"Bran is likewise an excellent clean elastic substance in which to pack peaches, apricots, and grapes, to go long distances. I have used it to send fruit to Caithness this last summer and autumn, and they travelled quite safe all that great distance both by sea and land."

NEW FLOWERS.

Pteris tricolor (Linden).—From M. Linden, Brussels. This

beautiful new variegated fern was awarded a first-class certificate of merit. It is a dwarfish plant, with the habit and appearance of Pteris aspericaulis, of which it is a variegated variety. The fronds are about a couple of feet in length, pedately pinnate-pinnatifid, *i. e.*, pinnate, with the lowest pinnæ bipartite, the pinnæ and branches being pinnatifidly divided; the stipites are roughish dull purplish, the rachides and costæ purplish red, the latter bearing purplish-red spines on their upper side at the base of the segments. The fronds are of a deep green, the purplish-red rachides bordered on each side with a broad band of grayish-white; the young fronds are deep red. The colours are very striking and effective, and render this a most important addition to the fern family, amongst which variegated forms are rare. It was stated by M. Linden to have been introduced from Malacca.

ADIANTUM PATENS.—From Messrs. Veitch and Son, Exeter and Chelsea. This is an extremely elegant stove fern, producing a tuft of erect fronds, which in this instance were a foot or more in height, though the plant was not fully developed. The fronds are bright green, pedately branched, the branches being pinnate; the pinnules oblong, very obtusely rounded, somewhat curved backwards, crenately-lobed, and bearing a few reniform-orbicular sori. The plant was awarded a first-class certificate of merit, as being a desirable species of a highly ornamental character. It had been obtained from the continental gardens, as a species of Lindsæa.

LÆLIA PRÆSTANS.—From R. Warner, Esq., Broomfield. A weak plant bearing one small flower, of a very ornamental character. The stems were short clavate; the leaves oblong acute or bluntish. The flowers were of a pale purplish rose, three and a-half inches in expansion; the sepals lanceolate, the petals ovate, twice as broad as the sepals, the lip rolled up into a curved tubular form, about an inch and a-half long, and having inside, near the mouth, four very slightly raised or crested veins, the two exterior of which were the most prominent; the tube-formed portion of the lip was orange-yellow inside, and tinged with purple exteriorly, the mouth being of a deep rose-purple indistinctly margined with white. It was very closely allied to L. pumila.

LÆLIA PUMILA, var. MAJOR.—From R. Warner, Esq. This was also a small weak plant, and proved to be identical with the Cattleya pumila, var. major, of Lemaire ("L'Illust. Hort." vi., t. 193), who proposes to reduce Lælia to a section of Cattleya. It was similar in habit to the foregoing, with rather longer and more decidedly oblong leaves. The flowers also were larger, measuring over four inches across, with the lip two inches long: the sepals and petals of the same form and colour as in that called præstans, but the lip differently coloured, the tubular por-

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tion being white inside, and whitish below, purplish above on the outside, while the mouth was rich rose-purple, paler towards the edge; two obscure crested veins only were visible inside the lip. Mr. Warner stated that the latter plant, which he called Lælia spectabilis, "always has larger flowers than præstans, even when the bulbs of præstans are the stronger of the two. The plants had been imported from Brazil as Cattleya marginata, and were both regarded by the Committee as forms of the variable Lælia pumila, better known under the name of Cattleya pumila, of which the Cattleya marginata of gardens is again another form.

ONCIDIUM CHEIROPHORUM (Reich.).—From R. Warner, Esq. This was a cut spike of an exceedingly curious small-flowered yellow species, much less showy than many other kinds, but of remarkable structure, and forming a pretty, free-blooming, small-growing plant. It had been in bloom for six weeks: the sepals and petals were roundish, concave, and reflexed; the lip three-lobed with two ear-shaped projections at the base, the middle lobe roundish, and the lateral ones somewhat oblong spreading; the column had a pair of large curved lateral wings near the top, a strong recurved tooth or horn standing up in front of it, and the crest of the lip was arched, with a pair of teeth at its base. The flowers were clear pale yellow, and slightly scented.

From the Horticultural Society's Proceedings.

POINSETTA PULCHERRIMA.

MR. EDITOR,—Doubtless there are many who have, on visiting Covent Garden Market during the past few months, been struck with some beautiful plants exhibited for sale, with, as it were, a plume of scarlet leaves surmounting a base of a splendid green. I dare say they also, like myself, have been tempted to purchase. My plant, not knowing how to treat it, does not seem in a flourishing state, and, as I do not know the name, I cannot find out the cultivation required. Can you help me? Query, is the plant Dracæna ferrea? A LADY SUBSCRIBER.

[Your plant, from the description you give, is the Poinsetta pulcherrima, a native of Mexico, introduced by M. Poinsetti, in 1834. Mr. Lowe, in his "Beautiful Leaved Plants," gives the following description and cultivation:—"*Description.*—A half-shrubby, straggling stove plant, with ovate leaves, and large glowing scarlet bracts, spreading like a star, sometimes as much as a foot in diameter, rendering this one of our most showy stove plants for winter decoration. It is extensively grown for Covent Garden Market, both for cut flowers and in five-inch pots for

decoration. The white variety (P. pulcherrima albida) is also very handsome, especially by candlelight. *Culture.*—Summer temperature, 60° to 70°, winter, 50° to 55°. Soil, equal parts of sandy peat, leaf-mould, and fibry loam. When the plant has ceased flowering, it should be cut down to within six inches of the soil, and after that kept in a rather cool and dry situation for two months, then repotted, furnishing a liberal shift, and placed in a warmer temperature, giving a small supply of water, till the young shoots have made some progress. As the rich scarlet bracts are placed at the end of each shoot, the more branches there are produced, the better display the plants will make; therefore, if the shoots are few at first, stop them, to cause more to spring up, but do not stop them after the plant has made considerable growth, for then the purpose will be defeated. As the plant advances in growth, spread out the shoots to give free exposure to the leaves. Tie the shoots to neat, straight sticks, and increase the supply of water. Occasionally a watering with weak liquid manure will assist the growth materially. Use the syringe daily to keep down red spider, and give plenty of air in hot weather. The whole intent of this mode of culture is to throw enough strength into the shoots, and thus prevent them from being weak, for then the bracts will be small, and lose much of their showiness. The real flowers are inconspicuous, though very curious. *Propagation.*—Take in spring young shoots cut close to the old wood, and lay them by for a few days to dry up the juice; then insert in sand, and place them in a gentle bottom-heat, shading from sunlight. When rooted, pot off and shade for a short time, after which, gradually inure them to bear full exposure to the light. Repot as soon as the roots reach the side of the pot, and treat as established plants. Cuttings may be struck from the old wood when the plants are cut down after flowering; these should be in lengths of four inches, and laid on a warm shelf to dry up the wounds before planting; these are more difficult to manage than young shoots a few inches long grown in spring." Dracæna ferrea is much duller in colour, and we are of opinion, nay, are quite certain, it must be the P. pulcherrima, which has been largely sold this year.]

TULIP GOSSIP.

If the pleasure of beholding a bed of tulips is short, because the bloom continues for so limited a period, we have the pleasures of anticipation and retrospect. "A thing of beauty is indeed a joy for ever;" and when we take out of its nest, in the tulip cabinet, the favourite bulb, even though it be a Maid of Orleans, a Poly-

phemus, or a Triomphe Royale, we at once see in imagination the succeeding or past bloom. Like the old pensioners of Chelsea or Greenwich, we, too, are ever ready to fight, as it were, our battles over again—to recount our surprises, our losses, our hopes, or our disappointments; and ten minutes ago you would have found me leaning over my bed, examining all the flock ere I placed on the cloth for the evening, for there is every appearance of a sharp frost. Here I am writing gossip about tulips by the fire; and, thanks to nomenclature, I can bring before my view all the favourites in the bed. All this seems, no doubt, very strange to outsiders why we should value one flower more than another.

Alphonse Karr, in one of his admirable books, gives us the following sketch:—

"The party was assembled under a tent, between two beds of tulips, planted in regular rows. M. Réault stopped for a moment to see who came in; and when he perceived it was only one of the profane, he bade him 'Good morning,' with a nod, and, without quitting his serious tone and manner, resumed his demonstration. He was then before a tulip of a white ground, streaked with violet. 'Gentlemen,' said he, 'this is Vandaël; it is a pearl of the kind; it is not in all its beauty; the month of April was cruel for our plants, and March was perfidious. This is Joseph Deschiens; we know nothing to be compared to this superb plant; the ground is white and the stripes violet.'

"'But,' interposed Arnold, 'was not that which you called Vandaël likewise white and violet?' M. Réault smiled disdainfully, looked at the other spectators, and, without condescending to reply to Arnold, continued—

"'Here is Gluck, white and violet, a magnificent plant of the seventh line.'

"'Your pardon!' again interrupted Arnold, 'but Vandaël and Joseph Deschiens are likewise white and violet.'

"This time M. Réault shrugged his shoulders with a movement of impatience. One of the spectators replied to him by nearly a similar sign; but which, however, had this particular shade—that it exhorted M. Réault to have pity on the profane, and exercise his patience. This gentleman remained a little behind with Arnold, and said in a low voice, 'You are not an amateur, sir.'"

Although this little sketch partakes freely of the taste of a somewhat impetuous nation, yet it may be taken as the general view of the picture seen on the side of the public. Doubtless there are many Arnolds and many Réaults; and we are frequently obliged to say, "You are not an amateur;" while they, even if they have gardens and cultivate flowers, say, "For my part, my friend, I cultivate flowers only for the sake of seeing them, and

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not for the pride of showing them. I have but about fifty tulips of all colours. I never reject any that will do me the honour to bloom in my garden, not even those not according to the hearts of the great amateurs." Here we differ. What prices, too, tulips command. Leave out the Dutch bubble, which has so lately been described in these pages, Louis XVIII. has sold for £42. Fanny Kemble, I believe a seedling of Mr. Clarke, a well-known raiser, sold for upwards of £90; other varieties, such as Polyphemus, have fetched £14 and £15 per root; and even at the present time, if we take up the catalogues of last season, we find some heavy prices. And yet it is somewhat remarkable when, among all these novelties which are so frequently found in the lists of celebrated amateurs, we see in the reports of the various exhibitions the names of almost all those exhibited five-and-twenty years ago. The shyness of increase may in some measure account for this, although, if these really do excel their predecessors, why not exhibit more freely? Our national meetings are rapidly, however, developing their merits, and I look to the forthcoming one as a great event.

The properties of tulips is a subject discussed frequently; never, however, has there been so clear an exposition of the various points which characterize a fine variety as that by Dr. Hardy, of Warrington, given in one of the very earliest numbers of the "Midland Florist." Many of the present subscribers will, perhaps, not possess the first volume; but, if possible, I would recommend a careful perusal. Young growers, and old ones, too, may learn what to cherish and what to destroy; and if they will only judge impartially, I think I may add, they would not see so much in many seedlings to allow of their claim of superiority.

The physiology of the tulip is a subject worthy of far more attention than is generally devoted to it. Mr. Slater, of Manchester, seems to have paid considerable attention, and he has just published some remarks on colouring. The tulip petal, says he, consists of two skins, and a fleshy substance between them, and in a byblœmen is pure white; so that the outer and inner skins must be perfectly independent of each other, and each have its separate vessels containing colour, or else why should the outside of the petal of the flamed flower be much more correct in its distribution of colours than on the inside? It will often be seen that the inside has a much greater mass of colour than on the outside. The ground on the outside will be seen in beautiful stripes in the feathering, whilst in the inside one it will be nearly a self-colour, and very little ground. The same will be observed in a feathered flower. A question that wants solving is, How does the colouring matter get to the edge? Is it by veins an arteries, similar to those in our own bodies, all united and servi

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as conduits to conduct the colouring matter to its proper place; or is it conducted by little cells of colouring matter all connected together? This last appears probable, from blotches of colour being in the centre of the petal, which the rays of the sun has caused to flow similar to sap in trees; and a cold night coming on has completely stagnated this colour, and consequently it has become a blotch by the communication being cut off. I once observed in my offsets bed a singular thing, which may serve to elucidate this suggestion. One frosty night the foliage was discoloured by the action of cold, and on the rays of the sun shining upon them, the foliage assumed the appearance of hemp, with its numerous fibres in a state of decomposition. This arose from the sap having been frozen, and upon thawing it burst, thus cutting off the very means of conveying nourishment into the foliage. There is some analogy in this to what I have before suggested as to colour. The vessels containing colour having been frozen, no warmth will cause it again to become fluid. We all know that if the beds are kept at night warm by covering, so as to exclude frost, the marking of flowers is much more correct. Another very important suggestion arises, Is the colouring matter in the petals in October, or at what period does it get into them, and from what source?

It is a singular fact that a bud of a tulip was partially cased in the foliage until the latter end of April, and when the foliage was disengaged, nothing unusual could be seen; yet, strange to say, the foliage which had touched the bud coloured as the bud coloured, and eventually was as dark as the bloom, only on a green ground instead of a white one, and as perfect a facsimile as if an impression had been taken from an engraved copper-plate. Now it is evident that the colour must have exuded from the skin of the petals, or else it would not have left an impression, only so far as it had come into contact. A carnation petal will, upon examination, be found to be similar to the tulip, a white fleshy substance being between two skins; and as a proof that the colouring matter must be very slightly protected, the colour will run in wet weather, if not covered with something to prevent the rain falling on them." The question of how tulips are coloured is but little thought of, and as blooming time advances, I have but little doubt some persons will find time to observe the formation.

One or two words with regard to the National. At present the weather has been anything but promising; we have (this 24th of April) had storms of snow. I hope, however, it will considerably moderate, otherwise it must damage us. A letter received from Cambridge informs me that the exhibition will take place in the splendid grounds of Trinity College, and that

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His Royal Highness the Prince Consort, as Chancellor of the University, has been pleased to extend his patronage and support to the exhibition. The band of the Coldstream Guards will, by permission of the colonel of the regiment, entertain the visitors. To exhibitors, too, I understand that there is an important alteration in the schedule. Five prizes instead of six are offered in classes D and E, and four prizes are to be given in two additional classes for six and three-breeder tulips. In this I cannot but think, as will all other growers, that the committee have acted wisely, for breeder tulips are a very important point, and one which I was afraid our Cambridge friend had overlooked. I have every hope that the forthcoming exhibition will be one of the best ever held by the Royal National Tulip Society. The beds, take them as a whole, bid fair; warm, sunshiny weather, however, is sadly wanted. Mr. Headley and Mr. C. E. Brown are excellent executives, and the management may be safely left with them. Remember the date, May 24th, *not* the Derby day.

After the National is over, I will send you some interesting statistics, gathered during a number of years of tulip-growing, which I doubt not will prove acceptable to a large number of readers.

April 25th, 1860. AN EAST-END GROWER.

NO MORE RENT.

THE millennium of gardening and gardeners has nearly arrived, and henceforth, instead of setting aside a portion of our income to pay the quarterly demand of our landlords, the produce of our garden is to be sufficient to satisfy these claims. How this is to be done has just been given forth to the world in a little work, entitled, "The Garden that Paid the Rent," and in order, if possible, to profit by this new doctrine we have given the work a careful perusal. Leaving its merits out of the question, so far as paying rent was concerned, we were of opinion, from the author's preface, that there was at last before us what was, and is yet greatly needed—a handbook of Town Gardening.

"I have many friends," says he, "who live in the outskirts of large towns, most of them well-to-do gentlemen with large families. Their houses have usually had attached to them a piece of ground called by courtesy a garden. Sometimes that piece of ground has been trodden down into a firm, hard mass of earth with here and there a blade of grass struggling for existence in the place where it had once luxuriated. In winter it looked wet and wretched; in summer it was a relief to leave it, and seek a place where

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flowers really grew. At other times the whole piece of ground, except the path leading to the house, has been grassed over, not a flower to be seen winter or summer; the greenhouse, when there has been one, going to decay, or with now and then a wretched camellia struggling into existence. As in the case of my friend Atkins, I have asked the reason, and invariably have received the same answer—*the expense.* 'When we first came we tried to have a nice little garden, but there were so many things wanting; the gardener was always bringing in small bills for something or other, which he said was indispensably necessary, and so we thought it better and cheaper to have a bouquet from the florist when we wanted flowers, than to pay more to try and have our own, and be continually disappointed.' This I know from experience need not be the case." Here our hopes are raised, the picture drawn is too true, and again we diligently applied ourselves to find the author's remedy. As a gentleman, of course, we take his word that he has found *this need not be the case.* He has, however, kept secret his findings, for most certainly the book, so far as practically pointing out the remedy, might as well have not been written. Our author commences the subject of *paying* by introducing a friend named Atkins, whose garden seems in a *deplorable* state, and whose defence for allowing it to be so is—"'You see, I am not a young man now, I have gone through the follies of my greenness. When I was eight-and-twenty that garden, sir, was a floral paradise, a fructiferous paradise; no peaches were ever worthy to be pressed to woman's lip before peaches hung in nets against yonder wall. Sir,' and turning full upon me, Atkins looked like a man about to impart a solemn secret—'Sir, I grew my own orange-flowers for my own wedding-day, now I cultivate neither peaches for woman's lip nor orange-flowers for the chip of Mrs. Atkins; sir, *it never pays.*' Mr. Atkins had cultivated all kinds of choice flowers and fruit; Mr. Atkins had eaten peas and asparagus grown in his own garden; Mr. Atkins had possessed melon-pits, and was 'once on the brink of a pinery,' to use his own forcible expression. But vegetables and fruit at double the market price, to say nothing of the trouble of looking after the gardener, and the anxiety about fruit and peach blossom, were no longer, in his mind, the things to be desired." The garden is described as being simply a wilderness and waste. Oh! Atkins, you are no gardener, merely the ideal of idle phantasy, and so matter of fact are we that we cannot, after all that has been asserted of "gardening being the purest of human pleasures," for one moment allow that you who have experienced this joy should fall so low in the scale of neglect.

Fallen gardeners still in the possession of land and plants (for

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we are not told how all the flowers, orange trees, etc., were disposed of), is a thing unheard of, and hitherto unimagined. The author takes the management of the said garden, and we are informed that it is an acre in extent.

Amateurs of Putney, Kentish Town, Highgate, and Clapham, to whom this volume has been thought so applicable, have you an acre of land? We are not true Cockneys, but in all our peregrinations of the mighty Babylon never have we come across your villas with your acre of garden, and we suppose never shall. Indeed, we doubt if you would know how large an acre of land really was, generally measuring, as you do, your domains by yards and feet, instead of acres and roods. This is not the book of villa gardening, villas and acres of land being perfectly at variance. The paying of Mr. Atkins's garden is by the erection of vineries, cucumber-pits, rabbit-hutches, and apiaries. Laying out gardens generally is quite sufficient. Of course, the erection of these buildings adds considerably to the cost, but in the balance-sheet we don't find this taken into consideration, and we must, therefore, suppose that the whole be put into proper form ere a start is made. The money realized is—by forced grapes, 90lbs., at a guinea a pound, sent to market in April, £94 10*s.*; strawberries, at 1*s.* an ounce, £7 4*s.*; early cucumbers, 5*s.* a brace, £10; April peas, at 8*s.* a quart, £8; peaches at 2*d.* each, £1 5*s.*; apples, £3; asparagus, at £1 1*s.* a bundle, £5 5*s.*; vegetables consumed in house, at 4*s.* per week, £10 16*s.*; bees, £5; 70 rabbits, bought at 6*d.* each, value when killed, 1*s.* 6*d.*, £3 10*s.*; pig, £5; making a grand total of £153 10*s.* The cost is wages of lad, half to garden, other half charged to pony and pig (yet the pig is placed to the Cr. side), £7 16*s.*; manure, at 3*s.* 6*d.* per ton, 20 tons, £3 10*s.*; tools, etc., etc., £10; coke, £9; attention to fires, £15. Total, £45 6*s.* Clear profit, £108 4*s.*!

Were it possible to realize this at the cost above stated, the author seems to lose sight of the fact, that the prices of these forced articles is not regulated by the demand, but by the supply, and proportionally as this system was adopted (were it practicable), so would the market value diminish. We had almost forgotten the rabbits, but the primitive style in which they are managed is worthy of notice. "In a semicircle in the south-eastern corner is a separation, to consist of octagon wire, raised about four feet in height. You will have quantities of refuse vegetables, leaves of all kinds; I propose that you should throw them in here to your rabbits, of which you may always keep a dozen. Give them a little shelter in the corner, and they will grow as fast as you can consume them. Don't make favourites of them. Keep the common brown ones. The boy will kill them for you. They

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will reduce your butcher's bill, I assure you. I strongly advised Atkins not to breed rabbits. Buy them, I suggested, when they are six weeks old; they are then worth sixpence each. In ten weeks they will be full-sized rabbits fit for the table, and their value will be eighteenpence each. You will have fed them on the vegetable refuse of your garden; they will, therefore, not have cost you a halfpenny beyond their original price. You will thus have a clear profit of one shilling on each rabbit. As you kill off the four-months' old rabbits, try more sixpenny ones, and so keep up a succession." When we were boys, rabbit-keeping was a favourite pursuit, but we never found that they could be so economically kept. Vegetables alone to confined rabbits!

Although the volume fails in carrying out its title, some excellent remarks and ideas on the healthfulness of gardening, and on the management of various subjects, are to be found in its pages. "Did young ladies," says he, "of the present day devote themselves more to the pursuit of gardening, they would gain, in every way, health, beauty, and temper; headaches would not so often be known, and nervous affections be almost a thing of the past. How many hundreds of girls are there just blooming into womanhood whose time hangs heavily on their hands? If I have induced, by what I have said, some half dozen or more of these to devote their leisure to the culture of flowers, and, where practicable, of fruit also, I shall be amply repaid; for I feel assured, they and the home they grace will be the happier and more lovely for it."

The book is dedicated to Sir Joseph Paxton, by one who passed four years at Chatsworth House under his care and instruction.

ODDS AND ENDS.

THE long and severe winter and cold spring has added to the value of the potato as a vegetable. Although much has been written about its culture, especially during the last dozen years, yet such indifference is shown, that we do not see it cultivated as successfully as it might be. It is not my present intention to enter into the details of preparing the ground, selecting the seed, and how and when to plant it.

This I hope to enter into at some future time. I now wish to throw out a few hints as to the management of those planted, which will soon begin to push forth their shoots, some producing six or more, which are *generally* all allowed to remain. But why not thin out the shoots of the potato, or plant the rows a *great distance apart*, to allow the shoots to get a sufficiency of light and air for their full development?

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I have for many years made it a practice to plant the rows at a good distance apart, and *thin out* the shoots; if strong, I leave but one; if medium, two; but never more than three.

If necessary, I hoe the ground to keep in check the growth of weeds, but never earth them up with that implement; I much prefer the light steel digging-fork. After the shoots are thinned out, fork the ground about them and betwixt the rows to a good depth, at the same time with the fork place the required earth to the shoots; and, for proof of the results, treat a row or two in the general way, and note the difference in quality of produce.

The majority of the provincial agricultural societies award prizes for implements. How is it the horticultural societies omit them in their schedules of prizes? A many really handy horticultural implements are not sufficiently brought under the notice of the masses who use them. In the awarding of prizes to cottagers, what could be more acceptable than a few good, handy horticultural implements? We must reserve a few hints for a future time about horticultural societies, but must not omit a hint about plants and cut flowers in collections, possessing a *pleasing fragrance*, having a prize. How many plants in this class are seldom seen *together*, both new and old. Rarely do we see any fresh plant brought under the notice of the ladies, than it is tested by the organs of smelling to prove its sweetness. Then why not have a prize for collections of plants and cut flowers possessing a pleasing fragrance?

The continuance of cold weather will put many to their scheming to raise a sufficient stock of plants to fill the beds *well*, by and by; this season, I fancy not much before the end of the month, planting only. But let us have no meagre, half-filled beds; for better sow some at once with the hardy annuals, or sow edgings to beds, the centres to be filled with the bedding plants. There are many hardy annuals, well suited for the purpose, if properly managed, in thinning the plants in time. And it is to be hoped the present unfortunate season will induce many not to overlook some of the beautiful hardy annuals; but they are too frequently condemned for want of proper treatment—the ground but half prepared, and the plants too crowded.—J. K.

NOTES AND QUERIES.

[We shall feel obliged by any Correspondent or Subscriber forwarding answers to any of the following queries.]

WHITE ROSES.—The best perpetual blooming white rose for

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an east wall, Acidalie; for a south, Mrs. Bosanquet. Madame Legras and Madame Plantier are the best summer-blooming white roses, and the best growers. Virginal is probably the most beautiful perpetual white rose ever introduced; but as last year was her first appearance, she requires further trial. She was very weak on the briar last year, but is coming stronger on the Manetti this spring. Imperatrice Eugenie is almost white, appears a better grower, but not so good a flower as Virginal. If Virginal will grow vigorous on the Manetti stock, she would answer well for a south wall.

Select Lists.—In the select lists of tulips much repetition might be avoided would your readers exercise a little patience for two or three months. Considering that these lists have so recently appeared in the pages of the "Midland Florist," and that the last two seasons have proved so adverse to the tulip, growers generally would have the opportunity afforded them, in the approaching bloom, not only on their own beds, but also in the interchange of friendly visits, of inspecting and noticing newly-introduced varieties, and also of re-inspecting others which may have been in cultivation a longer time; and thereby introducing some decided variations from those lists previously given. I hope to have the pleasure of beholding several introductions on my own beds, at the different exhibitions, and on the beds of my friends; so that I may be able to give you descriptive notes of those which may come under my observation in a list of thirty-six varieties.—J. B. *April*, 1860.

Manetti.—Roses on Manetti should not be cut at all; they bleed back. When cut, lower eyes supersede the top ones, which is unnatural.

A Subscriber.—The dying back of the tops of roses on both stocks is common in severe winters, and when the winter sets in early, before the tops are matured. The leaves were much mildewed; and as these are the lungs of the plant, when they were destroyed the roses could not perfect the deporation of the sap. The worm, by your description, is the bud-worm. Hand-picking is best; gently squeeze the flutes in which the grub lurks; the least squeeze kills it. Search under the leaves; whenever at their development he sees them sealed or cuddled up together, he may then be certain that the grub is there. A little aloe water would, perhaps, baffle the pest.

National Dahlia Show.—The National Dahlia Show (open to all England) will be held, in connection with the Leeds Horticultural and Floral Fête, in the grounds of Kirkstall Abbey, Leeds, on August 31st and September 1st, 1860. Prizes will be awarded amounting to upwards of one hundred guineas. The schedule of

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prizes is as follows:—*To Growers for Sale.*—Class A, 50 blooms, dissimilar varieties: 1st prize, £7; 2nd, £5; 3rd, £3 10*s.*; 4th, £2. Class B, 24 blooms, dissimilar varieties: 1st prize, £5; 2nd, £3 10*s.*; 3rd, £2; 4th, £1 10*s.*; 5th, £1; 6th, 15*s.* (Exhibitors in Class A cannot show in Class B.) Class C, 18 fancies, dissimilar varieties: 1st prize, £5; 2nd, £3 10*s*,; 3rd, £2; 4th, £1. Class D, 12 fancies, dissimilar varieties: 1st prize, £2 10*s.*; 2nd, £1 10*s.*; 3rd, £1; 4th, 10*s.* (Exhibitors in Class C cannot show in Class D.) *Amateurs.*—Class E, 24 blooms, dissimilar varieties: 1st prize, £7; 2nd, £5; 3rd, £3 10*s.*; 4th, £2; 5th, £1 10*s.*; 6th, £1. Class F, 12 blooms, dissimilar varieties: 1st prize, £5; 2nd, £3 10*s.*; 3rd, £2; 4th, £1 15*s.*; 5th, £1 10*s.*; 6th, £1; 7th, 15*s.*; 8th, 10*s.* (Exhibitors in Class E are excluded from Class F.) Class G, 12 fancies, dissimilar varieties: 1st prize, £3 10*s.*; 2nd, £2; 3rd, £1 5*s.*; 4th, £1. Class H, 6 fancies, dissimilar varieties: 1st prize, £1 10*s.*; 2nd, £1 5*s.*; 3rd, £1; 4th, 15*s.*; 5th, 10*s.* (Exhibitors in Class G are excluded from Class H.) *Seedlings.*—Class J: Certificates will be awarded to all that are worthy, not less than three blooms of each variety. The secretaries are Mr. Turner and Mr. Keynes. The committee comprise the principal growers.

WORK TO BE DONE—MAY.

[By an error the notes on the Pelargonium, Fuchsia, Cineraria, and Pansy, which should have appeared under this head, are inserted in another part of the number.]

Auriculas.—These plants must now be kept clean, carefully picking off all decayed leaves. Rot is exceedingly fatal, and is greatly induced if water lodges in the inside of the leaves; therefore, in administering this, be exceedingly careful. Should any of the plants, however, show symptoms of this disease, they should be at once removed, as they infect the remainder. Water liberally, and remove where the sun will not scorch them; pinch off all blooming stalks.

Azaleas.—Those in bloom and those coming into bloom should receive a liberal supply of water; give abundance of air, and shade when requisite; keep young stock moving by pot-room, shade, moisture, and warmth. A check at this time is greatly injurious. Stop any shoots which require.

Camellias.—Air should now be given and shade from intense sun-heat. Those having formed their bloom-buds for the ensuing year may be, towards the latter end of the month, placed in a shady part of the garden.

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Carnations and Picotees.—All decayed leaves and dust should be carefully removed; give all the air possible, watering according to the state of your plants. Towards the latter part of the month your blooming shoots will begin to spindle, and they must be carefully and judiciously bedded out.

Chrysanthemums (*Large specimens*).—Much of the beauty of the specimen depends on the present month's treatment. Fix a stick to your main stem, and from this, by means of strings, to sloop up your side-shoots, bending some of them down towards the edge of the pot; in this, however, be very careful, otherwise they will snap off. All plants not in their blooming pots should at once receive a shift, stopping according to your variety, avoiding cramping and crowding. Pompones should be repotted into larger pots, and got on as forwardly as possible, so as to enable the cultivator to train them out next month, for which I will duly givee very direction; or the plants should now be planted out in the borders; pot those requiring it, taking great care not to break off the shoots; train as required. Pompones must now be pegged; copper wire is an excellent material; these may also, immediately the weather has become settled, be placed in the borders. Where required, pot on; plants in the borders should be well thinned out, remove all decayed leaves. Cuttings may be taken, and will strike rapidly.

Dahlias.—See article, p. 130.

Hollyhocks.—Planting must now be proceeded with without delay at the earliest opportunity. Towards the middle of the month, if dry, they should be well watered. Pick off snails, which at this season feed on the leaves, and thereby destroy the beauty of the plant. Should the month be highly favourable, go over the plants at the close, and remove part of the shoots. In strong plants three may be left; in others two or one, according to the variety.

Roses.—This month prune China and Tea-scented varieties. Water if dry, and when you can conveniently mulch the surface it will be conducive of good benefit to the plants. Those in pots should be shaded to prolong the bloom, and when done flowering the plants may be plunged in a warm border. Among the roses insects will, in all probability, be extremely busy. Keep your plants as clean as possible; water and mulch where practicable. In pots plants in bloom must be shaded and watered; when this is over, they may with advantage be plunged in a rich border where they should be protected from the sun.

Tulips.—If intended for exhibition, the bed should at once be covered with calico or canvas, which may be kept on night an day. If seed is desired, impregnate with the best varieties of the same class.

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CULTIVATION OF THE VINE.

"HAVING had long practical experience in the general management of the vine, I venture to offer this essay to the proprietors of the *Agricultural Review*. I surmise many write from theory, while I wish to place practice and experience in comparison.

"To be successful in grape growing a suitable compost and a well-prepared border are the chief considerations; wanting these all the science a gardener can afterwards bring to bear is almost fruitless, and what should have been done at first has to be done in the end.

"For the compost, procure the surface of maiden land, not more than six inches deep (the more fibrous the better), and pure cow manure, free from litter, three-fourths of the former to one of the latter, mix and put in a heap for six months or so, cover with sods to excite decomposition and prevent the escape of ammonia; two or three turnings will be sufficient to bring the mould to a properly pulverized state. Some growers recommend animal substances, in fact, gross feeding, for the vine, alike offensive to the senses and injurious to its growth. The compost I mention will afford good, wholesome, and nutritious food sufficient for all its wants. I will here remark that there may be some gentlemen fond of farming who will think I am trespassing too far on the manure; but if such there be, better for them not to build vineries or expect the luxury of a good bunch of grapes.

"The aspects south and south-east are best adapted for vineries, as they afford the most sun. The length and breadth of the house must be left to circumstances and choice, but the border should be from sixteen to twenty feet in width, the roots like a long run, and, notwithstanding this space, will soon reach the extremity; could the situation be obtained, all vineries should be built on a rising ground, so as to afford a ready escape for the winter and spring rains. On such an elevation borders may be sunk, but if such a site does not offer, and the vines be planted on the outside, the border should be made on the surface, first either flagged or concreted by hot fluid lime and gravel, to prevent the roots getting downwards. The front of the house, if the border be flagged, to be three feet from the level of the surface to the wall-plate, but if concreted, a foot excavated, nine inches of this to be filled with broken materials, such as brickbats, small stones, and lime rubbish, then three inches of concrete, leaving in either case three feet at back with an incline of one foot to the front, as a se-

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curity against the lodgment of water. Openings of six inches diameter, three feet six inches apart, should be left under the wall-plate for the introduction of the vines. The rafters or bearers to be placed at this distance over the openings, the sashes to be moveable, the lower fastened temporarily, the upper, about four feet long, made to run by rollers and pulleys. The walls in the interior of the house should be lined with white fire-bricks, closely jointed with Portland cement, no plastering or decorating, such embellishments in a little time become only receptacles for insects and their larvæ. In building the back wall it is most important to leave openings twelve inches by nine for ventilators under every alternate sash.

"A frame of twenty-six inches in length by nine high, grooved to permit the working of a slide thirteen inches, to be built horizontally in the thickness of the wall behind the fire-bricks, about three feet from the level of the floor. In the absence of a shed in the rear, it will be necessary to enclose those by wood-work, the covering to be twelve inches above the openings, fifteen under, and six from wall, leaving an aperture underneath, twelve inches by six, for the admission of air. It is considered that the fifteen inches under will cause draught sufficient, and by allowing twelve above, the air will rush to the top, and on its descent enter, losing the force that a direct passage would cause. Considering the house finished and the border ready, the latter may now be filled-in with the compost prepared as before directed, with crushed bones, charcoal, and lime rubbish added in proportion sufficient to keep it open and porous. This should be done three months previous to planting; it may rise above the intended level at back about nine inches, with a fall to four in front, to allow for sinking. The ends and front, if built with any kind of rough stones, so as to appear like rock-work, with a few suitable plants interspersed in the recesses, will be ornamental and much better than solid work, the crevices affording a ready passage for all surface water. If the vines are to be planted inside, the borders must then be excavated and finished as previously directed, from two feet and a half in depth at rear to eighteen inches in front, will be sufficient for these. It will be necessary in such borders to run a sewer in front, with a good fall to carry off all wet. The front wall should be arched under each rafter to give the roots access to the outside; the inside border to be made exactly in the same way as the one outside. Vines in pots and grown from eyes (the stronger the sooner in bearing) should be selected for planting; let the earth be shaken from them, and the roots carefully separated with the fingers, and spread out at full length, and planted from nine to twelve inches deep; if four or five eyes of the rod be also laid in

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they will produce a fresh supply of roots, and greatly invigorate the growth.

"A little fine compost of leaf-mould and loam placed below and over the roots, and pressed firmly, will stimulate the action of the rootlets.

"From the middle of February to the middle of March will be time enough to plant; before this there is no natural warmth in the earth to excite root action. My favourite way of training is up the rafters on T's twelve inches in width, with a prong of fifteen in length, and three inches of the prong to be inserted in the rafter; three holes are punched in the T's at equal distances, then strong wires run through and fastened with hooks at top and bottom.

"Vines trained to those will be one foot from the glass, a distance only barely adequate to preserve the foliage from being scorched through inadvertence or otherwise, green leaves being as requisite in the vegetable, as healthy lungs in the animal kingdom. The vines are now tied to the centre wires, and not cut back as yet, nor any artificial heat given, but plenty of air and sunshine. We must guard against forcing the sap until the feeders get established. The short rod system I recommend before all others, as by this method I have never been disappointed in obtaining a good crop. As the plants push, the buds are to be rubbed off gradually from the top of the rod to the three lower which are to form the groundwork of this system.

"I must here explain my reason for not heading back at the time of planting—the flow of sap in the length of rod stimulates the action of the roots; and, further, had the vines been cut, the wounds would not have had time to cicatrize, and, consequently, the escape of sap from the fresh cut vessels would weaken and impede their growth. When the shoots are long enough to be tied to the wires let it be done without delay. When ten inches or so in length, the centre one is to be cut off. My motive for leaving the three to this stage is lest an accident might occur to any of them. It is better to make provision to be sure of two. It will be requisite during the season, should the weather prove dry, to give four or five moderate waterings. If a house be intended for early forcing, fourteen feet of a rafter will be long enough, as the more confined the greater the control, for this length three rods will be first treated on. We have now two shoots to work from, the leading one may be allowed to run five feet, and then stopped; the second at two; but in order that no check be given to the growth by stopping, the laterals must not as yet be interfered with, but left as channels for the flow of the sap until both shoots have again pushed vigorously; they are then

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to be cut back to one eye, and not taken entirely away as some do. Tendrils and laterals were given by Nature, and for a purpose; for the former we have made tying a substitute, but the latter is a succour to the eye, which conceals the embryo fruit for the ensuing season—if taken away nothing is left to nourish it but a frail and broken leaf. Except the laterals that have been shortened and still to be kept to one eye, the vines are now to be left to Nature, as the more growth the greater the progress of the roots. As the season advances, more air will be necessary in the daytime, to strengthen the growth, and in the summer months a few of the sashes left a little way down at night will be of much service. Observe a vine planted in an ordinary border and nailed to an open wall, mark the luxuriance of the shoots and foliage, a lesson to us to imitate Nature. The floor of the house should be copiously sprinkled with water every morning to maintain a humid atmosphere, and the vines in the summer months syringed three or four times a week, which will refresh the leaves and keep their pores free. From the latter end of August the house ought to be closed early in the evenings and well syringed; allow the temperature in the morning to rise to 70° Fahrenheit. The wood of the two shoots left at the respective lengths of two and five feet will now be turning brown, the laterals are then to be cut off, all required of them has been accomplished; and were they allowed longer to remain, they would in maturing absorb from the parental buds the sap which will make them more vigorous. The best and most congenial mode of heating houses is by hot-water pipes, there is always a degree of sweetness and humidity in the heat they give. Should recourse be had to the old method of heating by flues, in order to assimilate in some degree to the other, when the flue is finished, let earthen pans or tiles, with cavities the same width as the flue, be placed on the top and kept filled with water, the vapour arising from them will counteract the drying heat that must otherwise result. As no fire-heat has yet been given, a little now in the mornings, from the middle of September to the middle of next month, will be essential, allowing the thermometer to rise before giving air to the same degree as mentioned for the latter end of August."

[The foregoing excellent essay on the "Cultivation of the Vine," from the pen of Mr. Caulfield, for several years superintendent and manager of the nurseries of Messrs. Feargus, Farrell, and Son, at Richmond, and formerly head gardener to the Bishop of Tuam, gained the first prize offered by the *Agricultural Review* through the Royal Horticultural Society of Ireland, and will, we doubt not, have been read with interest by many of our readers.]

(*To be continued.*)

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THE VEGETABLE GARDEN—JUNE.

Peas.—When this favourite vegetable is required late in the season, a few may be sown. This sowing should not be delayed beyond the first week, as, possibly, by the time they are in blossom, the mildews of autumn will come, and the crop will be precarious. Only quick podding sorts should be sown, such as Early Emperor, Sangster No. 1, and Prince Albert. Have the ground well manured, and if the soil should be at all dry, water the drills—it is far preferable to soaking the seed.

Broccoli.—In the more northern part of England it will be requisite to prepare the land for planting, the latter end of this month. If the plants are thick in the bed, thin them out, and transplant the thinnings four inches each way. They will be ready for the final planting sooner than those left in the seed-bed.

Cauliflower.—Make a sowing, and transplant those that are strong enough for removal.

Lettuce.—Sow once a fortnight the sorts named on page 127.

French Beans.—Sow first and third weeks this month; it is rarely they produce much if sown later.

Vegetable Marrows.—Plant out first week all those raised in pots, etc. The Boston and green sorts require rich land and plenty of room. A good plan, where many are grown, is to put them in rows ten or twelve distant, and three feet apart in the row. The custards may be planted in eight feet rows, and two feet from plant to plant. Let there be two or three plants in a clump.

Salads.—Continue to sow once a fortnight in rich moist ground.

Turnip.—Sow the last week of this month for autumn use.

Gherkins.—Sow according to directions given last month. Where a good crop is required, it should not be delayed beyond the first week.

Beetroots.—Thin out, twelve inches apart, and hoe the ground nicely after the thinning.

Endive.—Make a good sowing of this salad about the third or last week of this month. If sown earlier it is apt to run up to seed. The rows should eighteen inches distant, to allow for its spreading habits. The drills should not be made deeper than an inch. After sowing, and the ground raked, beat the ground over lightly with the back of the spade—it facilitates the germinating of the seed.

Potatoes.—Fork between them; if not too advanced, it is preferable to hoeing. Earth up those that are ready as soon as pos-

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sible, or much injury may be done to the crop by breaking off the potato-strings.

Celery.—Transplant into trenches. This crop generally succeeds cabbages, cauliflowers, or lettuces; and the system is to dig a trench, two spades deep, placing the mould on either side, and then to put in six or eight inches of manure, covering it over with three or four inches of soil. The rows are generally five or six feet apart. The interval may be used for a row of lettuce or other quick-growing salad. Take the plants from the seed-bed, pull off the side-shoots, but do not shorten either the top or the roots; put them in rows, eight to twelve inches apart, and, if large heads are required, plant only one row in a trench. It is useless to attempt to grow fine celery without an abundance of manure; either liquid or solid guano is a valuable auxiliary. Less stable manure will be required when this is used. Very fine celery can be grown with guano alone. Five or six pounds would be enough for a trench twenty feet long. In this case it would be requisite to dig out only one spade deep. Sow the guano in the trench, fork the ground in the trench deep, so as to mix the manure and soil well together. The planting may then be proceeded with.

Cabbage.—Make a sowing first week; they will come in acceptable for coleworts or greens for late winter use. For full instructions, see ensuing number.

Savoys.—Transplant the third and last week of this month; they take longer to grow than the cabbage. The early Ulm savoy is fit for use sooner than the Drumhead, but it does not produce anything like the quantity; therefore, hardly so profitable. Savoy plants must be allowed two feet each way.

Onions, carrots, parsnips, lettuce—in fact, all—will require weeding, thinning, and hoeing, and, whatever is done in this way, let it be done well. Never allow seed-beds or plantations to become smothered with weeds, as the crop will become spindling and unprofitable. Nothing looks so bad as a neglected garden; therefore, use the hoe frequently between growing crops, and weed. Where this is not practicable, bear in mind, one hoeing while the weeds are small will be more effectual than the operation twice or thrice repeated when the weeds are large. Look out for slugs, snails, etc., plenty will be found among the French beans and carrots. Give a dusting with powder lime. Look over gooseberry and currant bushes, the caterpillar will be at work early this month; dust with hellebore-powder; choose a calm dewy evening for the purpose.

JAMES LEVESQUE.

Market Gardens, St. Lawrence, Jersey.

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TWENTY-FOUR SHOW ROSES.

None but those who exhibit roses know how difficult it is to make up twenty-four roses of large size, which shall vary in colour and character, and yet look well together. Moreover, it is still more difficult to get them large, and yet good in form. It would be easy to make up the box by taking all the fine roses in the line of rose colour; but I want to make up twenty-four roses, large, of somewhat similar size, and yet distinct in colour and character. Some of the most perfect roses, and the most first-rate, we must leave out, because they cannot "ordinarily" be grown large enough to match the larger-sized roses, such as Vidot, P. Leon, Hallez, Raglan, Eveque de Nimes, Duprey, Simpson, Mr. Rivers, Gloire de la France, Alphonse Karr, Mons. Ravel, Geant des Batailles, Justine, Devoniensis, Rebecca, Triomphe de Rennes, Kean, Leopold de Bauffremont. The forms of these are beautiful, and if they can be grown large enough, they carry all before them in my mind; but, we may ask, where these can be grown large, what can be the size of such as I shall name? I do not myself contend for large roses; many of the roses which are only of medium size please me most; and I hope the time will come when roses of merit, no bigger in size than a half-crown, will be exhibited by the side of Col. de Rougemont, and be as highly appreciated. Till then, you must try and get large roses as distinct in colour and character as you can, and of somewhat similar size, for it is useless at present to put small or medium-sized roses, however good they may be, with roses of large calibre. I will name twenty-four roses that are large, good, and varied in colour and character. Those placed as supernumeraries next to the rose attached to a number are either of the same line of colour or character, or both, and they are highly eligible in case the exhibitor should not have the one that I have named. The greatest difficulty in the matter is, to get a good large white rose, and also a good large yellow rose:—

1. Princesse Clementine, white. 2. Boula de Nanteuil, dark crimson purple. 3. Paul Ricaut, brilliant carmine. 4. Coup de Hebe, delicate rose. 5. Ohl, deep rich velvety crimson. 6. General Jacqueminot (H. C.), rich purplish crimson; or Napoleon (G.) 7. Adelaide Fontaine, pale rose; or Gloire de Mosseuses, Paul Perras. 8. Mons. Montigny, reddish rose, appreciated; or Therese de St. Remy, not sufficiently known. 9. Angleterre, rosy pink; or Prince Imperial. 10. La Ville de St Denis, rich rose; or Comte de Nanteuil, Col. de Rougemon

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Charles Lawson, La Reine, Baronne Prevost, Madame Domage. 11. Triomphe de l' Exposition, dark crimson; or Duchess of Norfolk. 12. Mathurin Reignier, salmon pink; or W. Griffiths (Arcades ambo). 13. Leveson Gower, rich red. 14. C. de Sansal; flesh blush; or Reine des Danemark, Adele Prevost, Juno. 15. Madame Masson, claret; or Le Lion des Combats, maroon. 16. Triomphe de Paris, dark red dappled with purple. 17. Jules Margottin, brilliant glossy pink of carmine tendency. 18. Cloth of Gold, cream and yellow centre; or Solfaterre, Lamarque. 19. Lælia, soft glossy pink; Peyronny, Auguste Mie, Maxime. This last is not sufficiently appreciated; the two first and two last are much alike. 20. Malmaison, flesh centre. 21. Duchess of Sutherland, pale mottled rose. 22. Gloire de Dijon, ochreous yellow with orange tinge. 23. Madame Knorr, rose centre with white outer petals; or Blarii No. 2. 24. General Jacqueminot, scarlet; or L. Oriflamme de St. Louis, a large, fine, thick, scarlet rose, not quite so smooth in its aspect as the above, but it holds colour far better, and being fuller, would travel better. The capacity to travel and bear the heat of the room, are matters of the greatest moment.

I should like to see these twenty-four grown to perfection in one box. Except the Cloth and Blarii, I have grown all these roses on the stocks suited to them, and highly commend them as fine show roses. The substitutes are in all cases good, and, in some cases, perhaps better. The question is now, how should these roses be put into a show-box, so as to look well? It is not the least difficulty of an exhibitor to place them. My twenty-four show-box takes three lines of eight horizontally. Would any of the readers of the "Midland Florist" oblige me by placing them, distinguishing the base, the centre, and the top line. I have put in the colours for this purpose. I hope to exhibit something on the 4th of June, at the Dorchester Agricultural Meeting, the Bath and West of England Society having offered florists 100 feet of canvas. I hope to send 100 clusters of Solfaterre; and, as the Manetti roses are very forward, I trust that I shall be able to send many others. Frances I., planted out the 3rd of March, already shows its red colours, and will bloom in ten days, and Dr. Brettoneau within three weeks. I have over 500 roses on Manetti; and I must now leave Mr. Worthington and Mr. Helgar, who have spent a day and a night here, to say whether roses on Manetti are a "*failure*." W. F. RADCLYFFE.

Rushton, May 14th.

P.S.—The peaches here are miraculous in number, from the base to the top of the trees, and the foliage clean, thick, and most luxuriant. During the dry easterly wind, the trees were mulched

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and watered with four buckets weekly, which caused them to set, and also preserved the foliage. Mr. Sturt sent his head gardener, some days back, on purpose to see them. His words were, "I never saw such a sight!" I still cover with sheets, notwithstanding people's assertion that the blossoms will "*not set.*" The trees are close to a river. Last year I could only save 197 on the three trees; the year before, the number saved and brought to table or given away was 1,024. The same number might be saved this year, but it is too many for quality. The trees are from twenty-four to forty years of age, and were root-pruned and cut down about six years ago. The two lower trees are fine specimens of *youthful* and most vigorous trees. The white nectarine Pitmastor orange is wonderfully set, but the tree is hollow in the trunk, and I fear may not bring this delicious fruit to perfection.

THE TULIPS AND THE NATIONAL.

Mr. Editor,—Six weeks ago I commenced my task of forming an analysis, or rather compilation, of the meetings of the Royal National Tulip Society; and, although when I had worked hard at it during the whole of my leisure for upwards of a month, I could not help comparing myself to Sisyphus, who, for his crimes on earth, was doomed to roll up-hill a large block of marble, which, as soon as it reached the top, always rolled down again; so I, when I left off my task, seemed to have made no progress; and I had almost laid down my pen and given up the task as hopeless. However, I am now arrived at the end, except placing in the numbers of the current exhibition, which I shall do on my return to-morrow evening.

Of all the floral periodicals, I think there are few which have treated more fully on tulips and tulip-growing than the "Midland Florist," and, although I am fully aware that the papers I have sent you will occupy considerable space, still I believe they will be read with interest by a majority of the readers. Words in season are always acceptable, and at the same time when our tulips are in bloom, and, in many cases (the season being backward), are in their full beauty, I cannot but think that the few remarks made are such as will both profit and instruct.

I have endeavoured in the following pages to analyze, as it were, the great National exhibitions of the five past years, and as they have been holden in towns both north and south, we may fairly expect that every flower of repute has been represented; likewise, that all districts have had a fair chance. North, south, and midland have all their favourites, and, accordingly, as the meeting

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has been held far or near from that district so we may expect those varieties to occur more or less frequently.

The opinions expressed are not only those of myself, but also of others. Those in brackets are, however, from the "Horticultural Magazine," and in these, in most cases, I fully concur. I am aware that many will differ in these opinions; I, however, hope that whatever is written in respect to them will be advanced in a fair and liberal spirit, and I have little doubt but that the subject thus treated will be a source of much instruction and profit.

I have been a grower of the tulip for thirty-one years. I will therefore grant that, as an old stager, I am rather inclined to old varieties, but, in describing the new ones, I have done so to the best of my ability.

I have divided my subject into three parts:—*first*, a succinct abstract of the number of prizes and place of meeting; *second*, the number of prizes taken by each person, and its nature; and, *third*, a description of each flower exhibited, and the number of times each year it has appeared in the winning stands; also the total during the five years. The first is arranged periodical, the second alphabetical, and the third numerical.

I have paid no regard to the synonymes, placing each variety under the name it was staged; and this I found the only expedient plan.

I am glad to see in the present day such a leaning to that property of properties, a point indispensible in a fine tulip—purity and fine marking. Dr. Hardy, writing on the subject, makes the following excellent remarks:—

"Purity, marking, and form, are the chief properties—size, substance of petal, and all other points, being subordinate to these three. * * * * Fine marking, I doubt not, will always be held in high estimation by the genuine florist. It is this property alone over which he is enabled to exert any immediate control, and the only one on which the careful and intelligent cultivator has to depend for maintaining his superiority over the idle and the ignorant. So far as form and purity are concerned, all are on an equality, for whether tulips are by nature perfect or imperfect in form, or whether they are pure or impure in colour, their character in these respects cannot be altered by any system of management we may adopt. But it is not so with marking, which, except in varieties naturally defective in this property, will always reward the diligent cultivator with success proportioned to the amount of skill employed to produce it. It is obvious, therefore, that correct marking ought, on all occasions, be deemed an indispensible requisite in a tulip. In giving expression to this opinion, however, I am by no means prepared to justify the exclusive preference with

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which many florists have been accustomed to regard it, nor am I disposed to admit that it is the first property. Fine marking, unfortunately, is often associated with great impurity of base and stamens, as well as with bad form, and were we to adopt it as the test by which alone we are to distinguish the good from the bad, we should find ourselves under the necessity of admitting to competition many tulips we should be ashamed to own. *Form* is said by some florists to furnish us with a more certain test of excellence. Having already given a full explanation of my views on this property in the first volume of the 'Midland Florist,' it will not be necessary to recapitulate the rules there laid down for the guidance of our judgment respecting it. More enlarged experience has only tended to confirm the accuracy of the principles on which they are founded; and those who may feel particularly interested in this part of our subject will not perhaps find their time misspent by referring to the articles at pages 105, 141, and 365 of that volume. It will suffice for our present purpose to remark that perfect form is undoubtedly an extremely valuable property, for, independently of the pleasure we derive from the uniformity of outline and the graceful combination of equal curves which it presents, it secures to us the largest amount of space for the proper development of the marking, and at the same time enables us to examine them with the greatest advantage, by the command it gives us of the whole interior of the flower at one view. Still, notwithstanding the high opinion I entertain of the value of this property, the fact that we often meet with it in flowers so thoroughly impure, or so entirely destitute of marking as to be utterly worthless, forces me to the conclusion that we cannot always regard it as indicative of superior excellence. It becomes needful, therefore, to look for some other property on which we may more confidently rely as a *first* test of merit than their forms or marking, and this I believe we find in PURITY. * * * * The advantages we derive from purity are considerable, and have only to be seen and understood to be appreciated. In every well marked flower which possesses it, we invariably find an amount of brilliancy imparted to the marking proportioned to the degree of purity existing in the ground colour on which it is displayed. Indeed, purity seems to be essential to the production of fine marking, and especially so in the tulip. To be convinced of this we have only to take such varieties as Trafalgar, Surpasse le Cantique, Bienfait, Sable Rex, Lady Crewe, and Roix de Cerise, and compare them with Sphinx, Polyphemus, Abbott's Gem, Salvator Rosa, and Lac, or other similar varieties, when even the most sceptical will not fail to recognize the vast superiority which purity alone confers on those last-named. In fact, all adventi-

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tious colouring, whether of the base or stamens, is more or less destructive of beauty, and the sooner all impure varieties are discarded from our exhibitions and our collections, the greater will be the pleasure we shall all experience in the cultivation of this truly splendid flower."

Analysis of Exhibitors.

ADAMS, T., Esq., *Derby.*—1857, six breeders, 1st; 1857, three breeders, 4th.

ALLESTREE, Mr. T., *Draycott.*—1858, twelve blooms, 2nd; 1860, twelve blooms, 4th; 1859, six blooms, 3rd; 1858, three feathered blooms, 3rd; 1858, three breeders, 5th; 1859, six breeders, 3rd; 1860, six breeders, 2nd.

ASHMOLE, Mr. Luke.—1857, three breeders, 6th.

BARLOW, Mr. S., *Stakehill.*—1857, six blooms, 2nd; 1857, six breeders, 7th; 1857, three breeders, 5th; 1857, three feathered blooms, 1st; 1857, three flamed blooms, 8th.

BETTERIDGE, R. H., Esq., *Abingdon.*—1856, twelve blooms, 3rd; 1858, twelve blooms, 1st; 1859, twelve blooms, 1st; 1860, twelve blooms, 2nd; 1858, six blooms, 2nd; 1859, six blooms, 1st; 1860, six blooms, 1st; 1856, nine blooms, 2nd; 1858, three flamed blooms, 2nd; 1859, three flamed blooms, 4th; 1860, three blooms, 2nd; 1860, three blooms, 6th; 1858, six breeders, 3rd; 1859, six breeders, 1st; 1859, three breeders, 1st; 1860, three breeders, 2nd.

BRAGG, Mr. W., *Slough.*—1856, six blooms, 4th; 1856, three flamed bizarres, 2nd.

BROMLEY.—1857, twelve blooms, 2nd; 1857, three feathered blooms, 6th.

BROWN, Mr. J.—1856, three feathered byblœmens, 3rd.

CHADWICK, Mr. W., *Duckingfield.*—1858, three breeders, 2nd.

COLEMAN, J. J., Esq., *Norwich.*—1856, twelve blooms, 4th.

CRESWELL, Rev. S., *Radford Vicarage.*—1858, twelve blooms, 3rd; 1857, three flamed blooms, 4th; 1857, three flamed blooms, 5th; 1858, three flamed blooms, 3rd; 1859, three feathered blooms, 3rd.

FORMAN, Mr. T., *Chellaston.*—1857, six blooms, 3rd.

GODFREY, Mr. Joseph, *Chellaston.*—1859, twelve blooms, 4th; 1857, six blooms, 6th; 1858, six blooms, 3rd; 1859, six blooms, 2nd; 1860, six blooms, 2nd; 1857, three feathered blooms, 2nd; 1858, three feathered blooms, 1st; 1859, three feathered blooms, 1st; 1859, three flamed blooms, 3rd; 1860, three blooms, 1st.

HARTLEY, Mr. S., *Buslinthorp.*—1858, three breeders, 3rd.

HEADLEY, R., Esq., *Stapleford.*—1860, twelve blooms, 1st; 1856, six blooms, 3rd; 1859, three feathered blooms, 4th; 1859, three feathered blooms, 5th; 1860, three blooms, 4th; 1858, six breeders,

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1st; 1856, six rose breeders, 2nd; 1856, six byblœmen breeders, 2nd; 1856, six bizarre breeders, 1st; 1860, six breeders, 1st; 1860, three breeders, 1st; 1860, three seedlings, 1st; 1860, three seedlings, 4th; 1860, single seedling bloom, 1st; 1860, do., 2nd; 1860, do., 4th.

HART.—1857, six breeders, 6th.

HEPWORTH, Mr. J., *Leyton.*—1859, twelve blooms, 5th; 1860, twelve blooms, 5th; 1859, six blooms, 4th; 1860, six blooms, 3rd; 1860, six blooms, 4th; 1859, three feathered blooms, 2nd; 1859, six breeders, 4th; 1860, six breeders, 4th; 1859, three breeders, 4th; 1860, three breeders, 4th; 1860, three seedlings, 3rd.

HOUGHTON, Mr. T., *Hempshill.*—1858, six blooms, 5th.

HUNT, Joseph, Esq., *High Wycombe.*—1856, twelve blooms, 5th; 1860, twelve blooms, 3rd; 1859, six blooms, 5th; 1860, six blooms, 5th; 1858, three flamed blooms, 6th; 1856, three feathered roses, 2nd; 1856, three feathered byblœmens, 2nd; 1856, three flamed byblœmens, 1st; 1856, three flamed bizarres, 3rd; 1856, three feathered bizarres, 2nd; 1856, six bizarre breeders, 3rd; 1856, six byblœmen breeders, 3rd; 1858, three breeders, 1st; 1858, six breeders, 4th; 1859, three breeders, 3rd.

LAWRENCE, Mr., *Hampton.*—1856, twelve blooms, 2nd; 1859, twelve blooms, 2nd; 1856, six blooms, 2nd; 1856, three flamed roses, 2nd; 1856, three flamed byblœmens, 2nd; 1856, three feathered bizarres, 3rd.

LEA, Mr. .—1857, twelve blooms, 3rd; 1857, six blooms, 5th; 1857, three feathered blooms, 4th; 1857, three feathered blooms, 5th; 1857, six breeders, 3rd.

LOWE, Mr. John, *Derby.*—1858, six blooms, 1st.

LYMBERY, Mr. W. R., *Nottingham.*—1856, nine blooms, 5th.

MILLER, Mr. James, *Staleybridge.*—1858, three breeders, 4th; 1858, three feathered blooms, 6th.

MORT, Mr., .—1857, three feathered blooms, 7th.

MORTON, Mr., *Sheffield.*—1858, three feathered blooms, 4th.

NORMAN, Mr. N., *Woolwich.*—1858, twelve blooms, 4th.

NUNNERLY, Mr., .—1857, six blooms, 4th.

PARKYNS, Mr. James, *Derby.*—1858, six blooms, 4th; 1858, three feathered blooms, 5th; 1858, six breeders, 2nd.

PEACOCK, W, Esq., *Denton.*—1858, three feathered blooms, 2nd; 1857, three breeders, 3rd; 1857, three breeders, 7th.

PICKERILL, Mr. G., *Nottingham.*—1858, three flamed blooms, 5th.

SANDERS, S. M., Esq., *Staines.*—1856, nine blooms, 4th; 1856, six blooms, 5th.

SLATER, Mr. J., *Manchester.*—1857, six breeders, 2nd; 1857, six breeders, 5th; 1856, six bizarre breeders, 2nd.

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STEWARD, H., Esq., *York*.—1859, six blooms, 6th; 1860, six blooms, 6th; 1858, three flamed blooms, 4th; 1860, three blooms, 3rd; 1860, three blooms, 5th; 1858, six breeders, 5th; 1859, six breeders, 2nd; 1859, three breeders, 2nd; 1860, three breeders, 3rd.

TRAVIS, Mr. H., *Royton*.—1857, three feathered blooms, 9th; 1857, three breeders, 1st.

TREACHER, .—1857, three feathered blooms, 8th; 1856, three feathered roses, 3rd; 1856, three flamed roses, 3rd.

TURNER, Mr. Charles, *Slough*.—1856, twelve blooms, 1st; 1857, twelve blooms, 1st; 1858, twelve blooms, 5th; 1856, six blooms, 1st; 1857, six blooms, 1st; 1858, three feathered blooms, 6th; 1857, three flamed blooms, 1st; 1857, three flamed blooms, 2nd; 1857, three flamed blooms, 6th; 1857, three flamed blooms, 7th; 1856, three feathered roses, 1st; 1856, three flamed roses, 1st; 1856, three feathered byblœmens, 1st; 1856, three flamed byblœmens, 3rd; 1856, three feathered bizarres, 1st; 1856, three flamed bizarres, 1st; 1856, six rose breeders, 1st; 1856, six byblœmen breeders, 1st.

WESTBROOK, Mr., *Abingdon*.—1859, twelve blooms, 3rd; 1860, twelve blooms, 6th; 1856, nine blooms, 3rd; 1856, six rose breeders, 1st; 1860, six breeders, 3rd; 1860, three seedlings, 2nd.

WHITTAKER.—1857, three flamed blooms, 9th; 1857, three breeders blooms, 2nd.

WILLIAMS, B., Esq., *Aldgate*.—1857, twelve blooms, 4th; 1859, twelve blooms, 1st; 1856, nine blooms, 1st; 1859, twelve blooms, 9th; 1859, three flamed blooms, 1st; 1859, three flamed blooms, 5th.

WILLISON, Mr. W., *Whitby*.—1857, six breeders, 4th.

Analysis of Flowers Exhibited.

HEROINE.—An old yet very favourite variety; when it first appeared, it was also known as Hermoine. Perhaps no flower has appeared oftener in the winning pan than Heroine. [A fine rose of excellent properties, pure white, bright colouring, delicate feathering, and generally much admired. Many fancies consider it only a sport from Triomphe Royal; if so, it is a beautiful one, for it seems even shorter in stature. We have grown it pretty constantly for some years, and if it be another species of Triomphe Royal, it is worth growing for its apparent distinctiveness of character. Triomphe Royal is certainly flourishing in many places under different names, and plenty of it in a bed is always acceptable.] So long as tulips are grown, so long will Heroine be a favourite. Exhibited 1856, 7; 1857, 14; 1858, 14; 1859, 10, 1860, 7—Total, 52.

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AGLAIA.— An old and well tried favourite. A third row flower, although variable in height, pure, the quantity of colour in the bloom uncertain, showy. In the flamed state it is very frequently finely marked, while in the feathered state it is generally of medium colour. In both, however, it is steady, and a good strain will stand high in any collection. Some growers complain of its opening creamy, retaining its yellowness for several days, after which, however, it bleaches white and pure. Cup good. Exhibited 1856, 11; 1857, 12; 1858, 6; 1859, 7; 1860, 9—Total, 45.

TRIOMPHE ROYAL.—In the midland counties there has been an opinion that this is a feathered Heroine; it is a third row flower, and has been long a deserving favourite. [One of the best of our roses, though cheap, and abused as much as any by new names when in different characters. It varies from the slightest possible feather to the deepest flame and feather. It is always beautiful, and deserves, however plentiful it may be, and however cheap, to take its stand among the very best class of roses. It is very pure, and its shape is of the better kind, far above the average.] Exhibited 1856, 10; 1857, 4; 1858, 9; 1859, 11; 1860, 5—Total, 39.

ROYAL SOVEREIGN.—A fourth row feathered bizarre; an old favourite, possessing many good qualities, and greatly esteemed by tulip growers generally. Exhibited 1856, 5; 1858, 13; 1859, 6; 1860, 6—Total, 30.

POLYPHEMUS.—A second row flamed bizarre of average qualities, but frequently slightly discoloured in the filaments. [A first-rate bizarre, rather pale yellow and good dark markings, but often too heavy. The form pretty near the best we have; the petals lying so close as to form a whole cup. In general the purest of the bizarres, but ugly in its breeder state, and when it has nearly gone back. The bottom, however, never stained, but the colour of the anthers will occasionally run a little down the stamens. This would be a blemish if compared with one which was not so, but coloured stamens is not a disqualification like a stained bottom. In its best character this flower cannot be beaten by any existing bizarre, second and third rows.] The finest bloom I ever saw was in Mr. Turner's pan for 1856, at the Crystal Palace. I believe it was from a strain of Mr. Lawrence's. Mr. Slater says Polyphemus was broke by Mr. Lawrence of Hampton, four roots of which sold for £50, after it had been broken three years; at the same time it was well known there were other roots in the possession of Mr. Clarke and his friends. Exhibited 1856, 7; 1857, 8; 1858, 5; 1859, 3; 1860, 3—Total, 26.

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MAID OF ORLEANS.—A third row byblœmen, best in the feathered state. Mr. Allestree describes it, "In shape, purity, and marking first-rate. Some strains are steady, others are unsteady, or possibly there are two varieties under this name, and the unsteady strain is feathered Princess Royal." Exhibited 1856, 2; 1857, 7; 1858, 9; 1859, 2; 1860, 1—Total, 21.

CHARLES X.—This flower I believe to be identical with Royal Sovereign. Exhibited 1857, 13; 1859, 1—Total, 14.

PILOT.—A third row flamed red bizarre. Mr. Allestree justly says—"In a fine strain of Pilot, however, we have everything that can be desired in shape, purity, and marking for a red bizarre." Exhibited 1856, 1; 1857, 7; 1858, 9; 1859, 1; 1860, 4—Total, 22.

DUKE OF DEVONSHIRE.—Broken by Mr. Dixon. Some have asserted that it is identical with Sphinx, but I think in this they are mistaken. It is a finely-feathered bizarre, colour dark, large bloom, perfectly clean and pure. Duke of Devonshire lays powerful claims to being one of the best feathered bizarres we have in cultivation. Exhibited 1856, 4; 1857, 3; 1858, 2; 1859, 1; 1860, 2—Total, 12.

VIVID.—This flower, broken by Mr. Sandes, is a second row feathered bizarre; the form is good, the cup is also good, while the ground is perfectly clean and pure. It is in every respect a first-class flower, rich yellow ground, with fine brown markings. Exhibited 1856, 4; 1857, 1; 1859, 4; 1860, 2—Total, 11.

DAVID.—A second row byblœmen, of good qualities, a good strain, however, being indispensible. Some dealers sell an inferior flower for David. The following opinion I can quite endorse, "A byblœmen for the first or second row as showy as Louis XVI., and far more pure. There is scarcely a more effective byblœmen planted. The white is clear, the bottom fine, the colour dense, and the character at all times good; few people would think a bed at all complete without some of them." The first time I find it mentioned is in a catalogue of 1818, where it is priced at £6. Exhibited 1856, 8; 1860, 2—Total, 10.

SALVATOR ROSA.—A truly splendid byblœmen flower, a second row; the colour is heavy, ground pure white, petals stout, and form good. It is worthy of a place in every collection. There are, however, I find, two varieties, for Mr. Allestree remarks, "Salvator Rosa (Brown), for purity, shape, and stiffness of petal, stands at the head of the flamed purples. Salvator Rosa, raised by Gibbons, broken by William Allen of Derby, is a beautiful variety, with a good deal of workmanship about it, as the old florists would say, the feather and flame being rather heavy, terminating in fine hair strokes. It would be desirable to alter its name, as two first-rate varieties under the same name will necessarily lead to con-

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fusion." Exhibited 1856, 2; 1858, 4; 1859, 2; 1860, 2—Total, 10.

VIOLET ALEXANDER.—This is identical with Violet Quarto; it is a third row byblœmen, colouring not first-rate, petal good, and quite pure. Exhibited 1856, 5; 1857, 3; 1859, 2—Total, 10.

GEORGE HAYWARD.—A third row flamed bizarre, broken by Mr. Lawrence: something in the style of Magnum Bonum, but superior in marking and form. Exhibited 1856, 2; 1858, 1; 1859, 3; 1860, 3—Total, 9.

LORD DENMAN.—A fourth row byblœmen. Exhibited 1856, 3; 1857, 2; 1858, 2; 1859, 1; 1860, 1—Total, 9.

QUEEN OF THE NORTH.—A good first row feathered byblœmen, also coming flamed; in the latter state, however, it is superior to the former. The petals, form, and feathering are excellent; purity unquestionable. This was broken by Mr. Hepworth, and, I believe, without exception, has been highly approved. It is a first-row flower, stout petals, and moderate cup; colour light purple. Exhibited 1856, 1; 1857, 5; 1860, 3—Total, 9.

PRINCESS ROYAL.—Flamed byblœmen. A few years ago, I may say a very few years, every one was disputing as to whether this variety and Maid of Orleans were the same. My own opinion, indeed, I may say certainly, is, that the *two are distinct*; indeed, after the testimony given by three tulip growers, I think the point is settled. Mr. Turner says, "Princess Royal (Gibbon) is considered by some to be identical with Maid of Orleans. This is not the case, the latter being a shorter grower and a better flowerer. Many have only one variety, with both names, hence the difference of opinion." Mr. Allestree, describing Maid of Orleans, says, "Some strains are steady, others are unsteady, or possibly there are two varieties under this name, and the unsteady strain is a feathered Princess Royal." He also describes it as occasionally very fine but very unsteady, and generally incorrectly marked with a broad beam much lighter than the feather. Mr. Slater says, "I am of opinion that the Princess Royal and the Maid of Orleans are *not* the same, as I have found a difference in height and form. Probably the true Maid of Orleans is a lower riser than the Princess Royal;" and Mr. Parkinson, of Derby, in "Gossip of the Garden," says, "Another variety I have to remark upon is one we have been in the habit of calling Dark Princess Royal. This breaks from a pale slate-coloured breeder so much like Princess that it is very difficult to distinguish in the breeder state, but its style of marking when broken is very different, as it invariably comes with a strong, broad, dark beam, well pencilled and feathered, and without any of that of mother or breeder colour on the top of the petals the Princess is so sub-

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ject to. It is one of the best flamed byblœmens in cultivation, and, in the feathered state, a real gem. I know of none to beat it. This variety is being sold as the Maid of Orleans, and I believe it to be very difficult to distinguish when feathered. The only difference I can point out is that the feathering is narrower round the petals, and the colour does not run so deeply down the centre. This variety was first broken in a flamed state by Mr. John Spencer, of Adbolton, and called First-rate, but now I find the same sort figuring about Nottingham as Sir John Franklin." Exhibited 1856, 1; 1857, 3; 1858, 2; 1859, 1; 1860, 2—Total, 9.

SHAKSPEARE.—A feathered bizarre, rather uncertain, but when caught a fine thing. A bloom exhibited in 1856 excited admiration for its splendid marking. The colour was a deep bright yellow, and the feathering broad and fine. Although variable, it is worth growing. Exhibited 1856, 6; 1858, 1; 1860, 1—Total, 8.

DUCHESS OF SUTHERLAND.—Of these there are two flowers, the one a byblœmen, flamed, raised, or broken by Mr. Walker; the other a rose of the first row, broken by Mr. Groom. The former is a fine bold flower, of good form and perfectly pure; the latter is also worthy of a place in almost every collection. Unfortunately in my statistics I have not been able to keep the two separate. Exhibited 1856, 3; 1858, 1; 1859, 2; 1860, 1—Total, 7.

LADY C. GORDON.—A flamed byblœmen. Mr. Allestree describes it as quite pure, and finely marked, something like a good Aglaia. Exhibited 1856, 1; 1857, 1; 1858, 1; 1860, 4—Total, 7.

MADAME VESTRIS.—A third-row rose feathered. [This in its best state, that of a feather only, is one of the most rich and beautiful roses we have, but it more frequently comes full of flame and feather, in which state the colours are not so bright. It is a useful show variety, very pure, very distinct from all others, and an excellent marker for the country shows. When it comes with feather only, it seems as if the same quantity of colour that would be used for all the flame and feather were concentrated in the feather only, it is so dense and rich. In this state it was called Princess Sophia of Gloucester, but a few seasons' growth settled the question, and Madame Vestris is unquestionably the identical flower, although the colour is so much deeper while feathered only. It is a second-row flower, but has been occasionally put into the third when the roots have been finer than usual. It forms a fine contrast to anything in a stand while young, but flushes off purplish as it gets old.] Exhibited 1856, 6; 1859, 1—Total, 7.

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BACCHUS.—A third-row rose, or more frequently a byblœmen, generally termed Rose Bacchus. It is a fourth-row flower; comes out a reddish purple, and goes off quite purple, like a byblœmen. This is a full size, pure in the bottom, and useful in the bed, but we hardly know to which class we should place it when we wanted a byblœmen. It is a variety which has been in cultivation more than eighty years. Exhibited 1856, 2; 1857, 5; 1860, 1—Total, 8.

QUEEN CHARLOTTE.—With us, Queen Charlotte, a flamed, third-row byblœmen, has been, and is now, a great favourite. I would, however, admit that the petals are rather long and pointed. This, however, is also admitted by nearly every writer. It is also sometimes too full of colour. Its colour is bright; it is pure, and when caught is a good thing. Exhibited 1856, 1; 1857, 2; 1858, 1; 1859, 1; 1860, 1—Total, 6.

THALIA.—A good fourth-row byblœmen. The petals are stout, the colour good; the marking is, however, sometimes irregular,—perfectly pure. If anything, the cup is too long, or, rather, the flower does not generally open sufficiently. Exhibited 1856, 1; 1858, 3; 1859, 2—Total, 6.

ARLETTE.—A first row rose, feathered; several of the blooms exhibited at the National have been remarkably fine; with me it is a delicate grower. Exhibited 1856, 2; 1857, 1; 1858, 1; 1860, 1—Total, 5.

BLÆMART.—A second row byblœmen. Apt to come too heavy in the marking. Exhibited 1856, 1; 1857, 1; 1859, 3—Total, 5.

COMTE DE VERGENNES.—A third row rose. [A third and fourth row rose, of not a good form, but very pure and distinct, and useful for its height in arranging a bed. High coloured, and not a dear flower. It can hardly be done without in a bed, at least a bed would be arranged under a disadvantage, if there were not two or three of these useful roses in it.] Exhibited 1856, 1; 1857, 4—Total, 5.

CLAUDIANA.—A third row rose, nicely coloured, yet, unfortunately, too frequently slightly stained; singularly enough, this is on the upper portion. The bottom is nearly always pure, and I have seen it, especially in 1856, stand well. As a bed flower, it is to be highly recommended. Flower of a good size. In these days, however, when purity is so indispensible, it must be well looked at before staged. Exhibited 1856, 4; 1860, 1—Total, 5.

DR. HORNER.—Mr. Henfrey styles it "a showy variety, well shaped, with distinct, clear markings, feather and beam, raised by Mr. Groom, florist, of Clapham Rise. It is a fine feathered bizarre, first row, good form, superbly marked, and quite pure." Mr.

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Glenny, in speaking of it, says, "A tulip, broken by Mr. Groom, of Clapham, from a seedling of his own raising, and, though some growers fancy it like one thing, and others liken it to something else, we see no particular likeness of anything we have at present, and take it to be a new and good bizarre." Exhibited 1856, 2; 1858, 2; 1859, 1—Total, 5.

INCOMPARABLE.—A flamed byblœmen, possessing many good qualities. Exhibited 1856, 2; 1859, 2; 1860, 1—Total, 5.

LADY DENMAN.—A fourth row finely feathered byblœmen, generally called Abbott's Lady Denman. It is of good shape, and, I believe, invariably pure. Exhibited 1858, 1; 1859, 1; 1860, 3—Total, 5.

MERIT.—A fine flamed bizarre, much in the style of Pilot, and it is thought, by many, to be the same. It is, however, shorter, finely feathered and flamed, indeed splendidly marked; the beam is narrow, and the colours bright. In the midlands it is much esteemed. One of Mr. Gibbon's flowers. Exhibited 1857, 1; 1858, 1; 1859, 3—Total, 5.

PLATOFF.—A third row bizarre. [A popular bizarre, which has been broken from the breeder by many persons, and each gave it a name. Mr. Strong called it Charles X. Mr. Page christened it George IV., and it has been successively called many other names. Platoff, like nearly all tulips, is scarcely two seasons alike, but it is in its best character when it comes feathered. It is a middle row bizarre, bold cup, not a bad form, and very showy, but we have seen fifty in a store bed without observing one in good trim. When it is feathered all round with a good heavy feather, it is a grand addition to a bed, but it is not of first-rate texture.] Exhibited 1856, 2; 1859, 1; 1860, 2—Total, 5.

SARAH ANN.—A flamed byblœmen, and I believe is one of the numerous Chellastons. With me it is very variable in the marking, and I have only had one good bloom in four seasons. Exhibited 1856, 1; 1857, 1; 1858, 3—Total, 5.

SARAH HEADLEY.—A good feathered flower, pure, and of an excellent shape. It is one of Mr. Headley's fine seedlings. Exhibited 1858, 2; 1859, 1; 1860, 2—Total, 5.

SIR J. PAXTON.—A fine second row bizarre, broken by Mr. Willison, described in "Gossip for the Garden" as a very fine cup, quite pure, good ground, feathered with a dark purplish red, with a flame chiefly composed of breeder colour, interspersed with darker stripes, abrupt in its character of flame, the best strain very constant and free from flushing, which an inferior break is liable to, commencing even before the opening of the flower, and day after day becoming more densely coloured, until it nearly approaches a self or breeder. Third row. Mr. Allestree exhibited,

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1860, two flowers, both in feathered and flamed state, which were very fine. Exhibited 1858, 1; 1859, 1; 1860, 3—Total, 5.

Baquet.—A feathered flower. Exhibited 1857, 3; 1858, 1—Total, 4.

Everard.—A first row, high priced, but superior bizarre, flamed, although in 1859 it came nearly feathered. Exhibited 1859, 1; 1860, 3—Total, 4.

General Barneveldt.—A fourth row byblœmen, possessing good qualities. Exhibited 1856, 1; 1857, 2; 1859, 1—Total, 4.

John Linton.—One of Mr. Headley's splendid seedlings. A fine feathered byblœmen, of exquisite shape, perfectly true. The marking in those exhibited by Mr. Headley this season was not quite perceptible enough at the top of the petal; I am, however, told that this is only partial. Mr. Lightbody describes it, "A noble fourth-row feathered byblœmen, of the most perfect shape, strength of petal, and perfect beauty. The feather of it is black, of medium depth (in those exhibited, 1860, it was light). It stands long in bloom, and from the great depth of the petals it cannot quarter. The description given of Adonis in the 'Midland Florist' in 1854 is particularly applicable to this exquisite flower." Exhibited 1860, 4.

Lady Franklin.—This I believe to be Sarah Ann; if this is the case the bloom exhibited by Mr. Houghton in 1858 was very fine, and the strain must be valuable. Exhibited 1858, 2; 1859, 2—Total, 4.

(*To be continued.*)

STOCKS FOR BLOOMING NEXT SPRING.

There are three kinds suitable, namely:—Queen, with close sitting flowers; Queen, with blossoms rather spread out; Brompton, that do not branch out, and form only one stem, on which there is formed in the spring, as on the stock wallflower, one blossom stalk. The winter stock, besides the last-mentioned species, develops a strong bush on a low stem, and presents at the time of blooming a splendid sight: it is principally applicable to ornament flower-beds to be placed before the windows, because it develops its flowers early in the spring. As those with full flowers are most esteemed by amateurs, it is necessary that the sowing should not be too late, so that they may show blossom in

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the autumn; the most fitting time for this is from the beginning to the middle of April, and to the middle of May.* The sowing is done in the same manner as that of the summer stock, and the treatment is the same, with only this difference—that the summer stocks are planted immediately where it is intended they should remain, whilst these are repicked, and must be placed again in a cold bed, as mentioned for the sowing of the summer stock; when this is done, the chief root of every plant must be supported, that it may make more side roots, which is of great importance to their subsequent development; after replacing, the plants must have closed air for some days, and shade, if necessary; they require but little time for growing up, and after that they must again be accustomed to the air, and the lights must be removed during the daytime in favourable weather. At the end of May or beginning of June they will be strong enough for transplanting. Beds which have not been manured lately should be chosen for this; however, the ground must not be too poor nor too hard. Plant in rows one foot apart, the plants about one foot distant from each other; after they have been thus planted, they must be strongly watered if the weather is dry, and kept clean from weeds by frequent raking and loosening; should there be continual dry weather after they have been planted, it will be necessary to repeat the watering until considerable growth is made. In favourable weather the first buds will show themselves at the end of September, and they are immediately cut for implantation; for this purpose the plants are carefully lifted up with a spade, and the roots entirely freed from the earth sticking to them; if there is no opportunity for implantation near by, it would be advisable to cover the lifted out roots with wet moss to protect them from withering. The most suitable earth for these winter stocks is a nutritious, clay-like, grass bank earth, to which must be added, in case the earth is too binding, a sufficient quantity of river sand. Care must be taken in the implantation that the injured roots are cleanly cut and that they are sufficiently supported; the pots must be large enough to allow of the extension of the roots: although all this has been done, still care must be taken that the plants do not penetrate more deeply into the earth than they were in the open air. After the implantation they must be placed in a cool, shady situation and be well watered; there they must remain until they are completely grown, and occasionally slushed with water, but only when the earth is very dry, which may be easily known by the fading of the leaves; they may then be removed to protected shelves before being taken into winter

* Seed may still be sown, the season being favourable.—Ed. M. F.

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quarters. Particular care must be taken in wintering these stocks that they are watered as little as possible, and that they are not kept too warm, so that they may not begin to shoot too soon; in spring, when growth is again strong, they may be freely watered. —CARTER'S *Gardener's Vade mecum.*

CRYSTAL PALACE, MAY, 1860.

THE 26th of May will long be remembered by the visitors to the Crystal Palace; never was there a finer display, and seldom a more numerous company. One seemed to be within two high banks of gorgeous flowers, with scarcely a less attraction in the shape of England's fair daughters flowing in a gentle stream betwixt. Indeed, to make notes was a thing impossible. Several times we took out our book only to have our pencil thrust through the paper by some one equally anxious to see the flowers, and also duly admonished by the "man in blue" to move on in front. Space, however, will not admit this month of making any extensive notice, and so we must reserve stove and greenhouse plants until another opportunity. We never saw them finer. Roses in pots were magnificent. Messrs. Paul and Son's stand of ten were Coup de Hebe, Louis Odier, Madame Villermorz, Geant des Batailles, Paul Perras, Souvenir d'un ami, Paul Ricaut, Duchess of Sutherland, Auguste Mie. Mr. Lane was second, and Queen (H. P.), Devoniensis, and Coup de Hebe were most prominent. Mr. Francis was third. In ten pelargoniums, Mr. Turner had splendidly-coloured plants—Etna, Prince of Wales, Desdemona, Imperatrice, Evangeline, Governor-General, Fairest of the Fair, Admirable, Rose Celeste, Mr. Marnock. Messrs. Dobson and Sons were second. Vestal, a light variety, Euphemia, and the Bride, a lovely thing, were the most noticeable. Messrs. Fraser were third, and Mr. J. Fandry, gardener to E. Sanders, Esq., Fair Lane, Wimbledon, was fourth. In fancies, Mr. Turner was first: Modestum, Circe, Negro, Adela, Acme, Cloth of Silver, Madame Rougerre, Clementhe. Messrs. Fraser were second, Mr. James, gardener to W. J. Watson, Esq., was third, and Mr. James Weir fourth. It was full early for fuchsias, but some good specimens for the season were present. Venus de Medici, Lord Clyde, Princess of Prussia, and Queen of Hanover were the best. The pansies were good. In cinerarias, Messrs. Dobson and Son, of Isleworth, were first, and their plants were Regalia, Perfection, Admiral Dundas, Mr. Livingston, Editor, and Mrs. Hoyle. These

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were all splendidly done, especially Editor. Mr. Turner, of Slough, was second. Calceolarias were very fine. Messrs. Dobson had six finely-grown specimens, while for form and colour there was nothing to exceed those sent by Mr. John Preston, gardener to S. W. Jowett, Esq., Brixton, doing him great credit. They were very fine, and were, we believe, raised from Messrs. Dobson's strain. The azaleas were magnificent. We have no hesitation in saying they were as fine as ever were staged—plants five and six feet high all bloom. Pansies in pans were good, while a collec- of plants in pots attracted great attraction. (*Query*—would it not be advisable next season to offer a few prizes for this class ?) Orchidaceous plants were in abundance, and splendidly bloomed. Among novelties, La Crinoline, a fuchsia, attracted the derision and attention of the ladies, who did not admire it. We could scarce restrain a smile when a Scotch volunteer muttered those few lines of Burns's about "seeing as others see us." Many new seedling pelargoniums were exhibited, and these, we hope, our friend Mr. John Dobson will kindly bring under the notice of our readers. A new phlox, of the Drummondii species, called Lady Middleton, was remarkably pretty.

Tulips were fine, but not in quantities. Those of Mr. Turner were remarkably good, and we cannot but wish that he had brought them to the National. We simply give the awards without comment, for proving as they did a great attraction, it was only with difficulty we could get even the names of the varieties:—1. Mr. C. Turner, *Slough*, Aglaia, Henry Groom, Duchess of Cambridge, Dr. Horner, Seedling (a fine feathered byblœmen), Mr. F. Perkyns, Duchess of Sutherland (Groom), Alcor, Polyphemus, Pandora, Pactolus, Princess Charlotte, Adonis (a splendid bloom, quite the reverse of the one at the National), Lady Stanley, Seedling (flamed bizarre), Chellaston Beauty, Sarah Headley, King, Thalia, Arlette, Lord Raglan, Heroine, Maid of Orleans, and Everard. 2. R. H. Betteridge, Esq., *Abingdon*, Polyphemus, Spencer's Favourite, Triomphe Royale, Pilot, David, King (Willison), Queen of the North, Kate Conner, Royal Sovereign, Triomphe du Mond, Vivid, Victoria Regina, Seedling No. 2 (flamed byblœmen), Arundice, Sir J. Paxton, Coup de Hebe, Geo. Hayward, Lady Denman, Sarah Headley, Glory of Abingdon, Cerise belle forme, Duchess of Sutherland, King (Strong), Madame Catalani. 3. Mr. Westbrook, *Abingdon*, with Polyphemus, Don Roderick, Heroine, Rembrandt, Dreadnought, Spencer's Favourite, Rose Trial, Seedling (flamed byblœmen), Lady Catherine Gordon, Lord Denman, George Hayward, Diamond, Bessy, Lavinia, Glory of Abingdon, Aglaia, Platoff, Thalia, Ellen, Princess Royal, Seedling, Vivid, Maid of Orleans, Sir Joseph Paxton. 4. Mr. N. Norman, King

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(Willison's), Helena (Headley), Salvator Rosa, Dr. Horner, Naomi (Headley), Candidate (Cotterill), Aglaia, Maid of Orleans, Sir Charles Napier, Triomphe Royale, Duchess of Sutherland (Walker), Hayward's Magnificent, Mr. Ingleton (Norman). Mr. J. Perkyns, Miss Carr (Norman), Mrs. Bowles (Norman), Truth, Mr. Smith, Pilot (Gibbons), Dixon's Queen Ann, Lady Denman, Vivid, Mrs. Baker (Norman).

The Palace was in excellent order, splendid music by the united bands, and the arrangements reflected the greatest credit on the executive.

ROYAL NATIONAL TULIP SOCIETY, 1860.

TRULY this is an age of competition, and to this spirit of rivalry, in many instances actuated by a thirst for glory, it is that we owe our many comforts, necessaries, and luxuries. Man naturally desires fame, and this desire, far from diminishing, appears to gather strength.

> "Glory is like a circle in the water,
> Which never ceaseth to enlarge itself
> Till, by broad spreading, it disperse to nought."

While all the world is thus seeking after this glory, we florists are quite as intent on its attainment. Every year new societies are springing up, and only to compare our present flowers with the production of twenty years ago, and we at once see what this spirit of competition has done for us. So far as tulips are concerned, the new varieties brought into notice and produced by this desire to excell, are fast banishing their predecessors from the stage.

The Royal National Tulip Exhibition for the present season, was held at Cambridge, on May 24th, 1860, and taken as a whole, may be considered quite equal to its predecessors. The weather had debarred some from staging, for from accounts and experiences we have received from the midland and northern counties, we find some beds will be a week ere they are in bloom, while others have suffered terribly from the severe and wet season.

Cambridge is well adapted for the holding of a national exhibition of any sort. The splendid grounds of Trinity College were placed at the disposal of the committee, at once presenting every attraction, natural and architectural. The support afforded by the visitors, too, was most encouraging, reminding one of the palmy days of the Park or Chiswick; nay, we doubt almost, if ever it were excelled in even these acmes of floricultural success.

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"Although the south was pretty well represented in Messrs. Betteridge, Hunt, and Hepworth, still we were sorry to miss old faces. Why Mr. Turner, of Slough; Mr. Lawrence, of Hampton; and Mr. Norman, of Woolwich, were absent, we were almost at a loss to conjecture. Surely they had fine flowers, and must have been well out.

The day was all that could be desired. Tents were erected, the Coldstream Guards played a selection in their usual good style. Cambridge seemed intent on satisfying the visitors, and making a regular gala day, while every arrangement was made for the comfort of both visitors and exhibitors, by the worthy secretary (C. E. Brown, Esq.) and the committee.

The judges were Dr. Hardy, of Warrington; Mr. Lightbody, of Falkirk; Mr. Rickard, of Cambridge; and Mr. Hall, from the Royal Nursery, Slough.

The next exhibition will be held, we believe, at Derby, Nottingham declining, on account of the state of the staple trade.

In the following awards, the tulips are placed as they were arranged in the pans, commencing left and going right. The notes in brackets are those taken on the spot. In making these, we were kindly assisted by the Rev. S. Creswell, of Radford Vicarage, a well-known grower and raiser of the tulip:—

CLASS A, TWELVE TULIPS DISSIMILAR.—1. R. Headley, Esq., Stapleford (£7), Aglaia (fine); General Havelock (good red bizarre, short cup, fine); Seedling (a deep feathered byblœmen, good); Leonora (scarlet feathered rose, deeply marked, but perhaps slightly narrow at the top of petal); John Linton (feathered byblœmen, splendid form, perfectly pure—in the specimen exhibited the marking was not continued uniform all round, especially at the top); Sir C. Napier (heavy feathered, dark violet byblœmen, a good flower but the three outer petals hardly close enough for the standard); Celia (deep feathered, rose in style, but superior to Heroine, short cup); Polyphemus (stamens slightly stained); Demosthenes (like a good Royal Sovereign could not be safely shown in one pan); Sarah Headley Everard (fine heavily feathered byblœmen, good); David (slightly stained). 2. R. H. Betteridge, Esq., Abingdon (£5)—K 18, Grooms (light feathered byblœmen, very fine, but still scarcely perfect in the feathering, will make a splendid variety); Royal Sovereign (good); Lord Denman (finely flamed and pure); Triomphe Royale (flamed Heroine, very fine); Aglaia, Seedling No. 2 (flamed byblœmen, something in style of Victoria Regina, pure); Mary Jane (very fine light feathered byblœmen, short cup, stamens slightly waxy, but would, we think, improve); Sir J. Paxton (fine feathered bizarre); Everard (fine flamed red bizarre); Kate Conner (fine light feathered scarlet rose, not well marked at top); George Hayward (splendid red feathered bizarre, well marked); Duchess of Sutherland (splendid flamed byblœmen, finely marked). We are particular in describing these two pans, being both very fine, and so near to each other that it would be a difficult matter to decide which was superior. 3. Joseph Hunt, Esq., High Wycombe (£4), Shakspere; Aglaia; Franklin's Superb; Royal Sovereign; Lady C. Gordon (fine rose, well marked); Princess Royal; Colbert; Heroine; Lady Denman (very fine feathered byblœmen, good shape,

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pure); Strong's King; Bion; Queen of the South. This was also a good pan. 4. Mr. T. Allestree, Draycott, Derby (£3), Sir J. Paxton (a splendid heavy dark flamed bizarre, very pure and fine); Sarah Ann; Pilot; Maid of Orleans; Aglaia (feathered); Vivid; Aglaia (flowered); Sir J. Paxton (feathered, fine); Salvator Rosa (Allen's); Napoleon (fine, deeply feathered scarlet rose, very pure); Miss Creswell (fully maintains its former character); Gem (Willison). 5. Mr. J. Hepworth, Lea Bridge (£2), Lord Lifford (good fine feather); Catherine Gordon; H. B. Stowe (fine deep feathered byblœmen, short cup, pure, and will make a fine variety); Platoff; Princess Royal, Thomas Brown, Triomphe Royale; Seedling 240 (dark violet, the feathering slightly heavy); Heroine; Major Beauclerc; President (fine flamed red bizarre); Claudiana. 6. Mr. Westbrook, Abingdon (£1), Royal Sovereign; Don Roderick; Ellen; Glory of Abingdon; Queen of the North; Rose Trial Premier; Bessy; Incomparable; Polyphemus; Lady Catherine Gordon; George Hayward. Other competitors in this class were—Mr. Batten, Clapton; Mr. Linton, Cambridge; Mr. Godfrey, Chellaston, and Mr. Coleman of Norwich. Ten pans staged.

Class B, Six Blooms, one feathered and flamed in each Class.—1. R. H. Betteridge, Esq. (£5), Seedling No. 2 (dark flamed byblœmen, good form, but marking deficient), Lord Raglan (fine bizarre, very good, feathered and flamed); Geo. Hayward (fine); Aglaia; Heroine; Queen of the North. 2. Mr. Godfrey, Chellaston (£4), Queen Charlotte; Gem; Triomphe Royale Heroine (feathered, premier, very fine); Vivid; Sovereign. 3. Mr. J. Hepworth (£3), Platoff; Triomphe Royale; Magnus; Everard; Heroine; Seedling 79 (deep violet, feathered byblœmen, pure, and finely marked). 4. Mr. Hepworth's (£2), Polyphemus; Lady Catherine Gordon; Salvator Rosa; Pilot; Walworth Seedling, 84. 5. Joseph Hunt, Esq. (£1), Pilot; Triomphe Royale; Violet Rougetre; Sanders' Duke of Devonshire; Violet Amiable; Slater's Mary Chaworth (feathered rose, good form, but the stamens slightly waxy, would, perhaps, improve by age). 6. H. Steward, Esq., York (10*s.*), Naylor's No. 5; Terence; Aglaia; Queen of the North; Pilot; Count. Other competitors were Mr. Coleman, Mr. Westbrook, Mr. Headley (whose pan was disqualified by having two feathered byblœmens instead of one feathered and one flamed. This pan would have stood first had it not been for this mishap.) Mr. Batten and Mr. Linton. Eleven pans staged.

Class C, Three Blooms, one in each class either feathered or flamed.—1. Mr. Godfrey, Chellaston (£3 10*s.*), Heroine; Mrs. Pickerill; Sovereign. 2. R. H. Betteridge, Esq. (£3), Lord Denman; Royal Sovereign; Heroine. 3. H. Steward, Esq., York (£2), Duke of Devonshire; Aglaia; Lord Denman. 4. R. Headley, Esq. (£1) John Linton; Pactolus (a feathered red bizarre, fine shape and pure, very good); Sarah Headley. 5. H. Steward, Esq. (15*s.*), Sphinx (exceedingly fine, short cup, pure); Bacchus; David. 6. R. H. Betteridge, Esq. (10*s.*), Lady Denman; George Hayward; Arlette. Other exhibitors in this class were—Mr. Hepworth, Mr. Thorneley, Mr. Allestree, Mr. Lenton, Mr. Westbrook, Mr. Batten, and some other gentlemen whose names we omitted to take down. Nearly twenty pans were staged in this class.

Class D, Three rectified or broke Seedlings, exhibited by the Raiser.—1. R. Headley, Esq. (£2 10*s.*), Hermione (fine flamed rose, in style of Triomphe Royal), (Query, Heroine originally was named Hermione; is it wise to name another flower by this?); Pactolus (described before); John Linton (ditto). 2. Mr. Westbrook (£2), Seedling No. 4 (scarlet flamed rose;) Ditto Seedling No. 10 (pretty feathered bizarre, short cup); Seedling No. 6. 3. Mr. Hepworth (£1 5*s.*), with seedlings No. 381, 114, 171 (all promising).

Class E, Single Blooms of rectified or broke Tulip Seedlings, Exhi-

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BITED BY THE BREAKER OF THE SAME.—1. R. Headley, Esq. (£2), John Linton (described before). 2. R. Headley, Esq. (£1 5*s*.), Pactolus (described before). 3. J. Hunt, Esq. (£1), Victor Emmanuel (a splendid rose). 4. R. Headley, Esq. (15*s*.), not named.

CLASS F, PREMIER FLOWER, FROM THE WHOLE EXHIBITION.—Flamed: R. Headley, Esq. (£1), Aglaia, in first pan of twelve. Feathered: Mr. Godfrey (£1), Heroine, in the second six.

CLASS G, SIX BREEDERS.—1. R. Headley, Esq. (not named. The two rose breeders and one of the bizarres were remarkably good). 2. Mr. Allestree, Princess Royal; Seedling; Sir J. Paxton; Seedling; Adonis; Juliet. 3. Mr. Westbrook, Henry Juski; Polonius; Peter Wallace; Seedling (fine rose); Sarah; Seedling. 4. Mr. Hepworth, Nos. 244, 284 (fine rose), 261, 231, 246, 219. There were several other pans staged.

CLASS H, THREE BREEDERS.—1. R. Headley, Esq., Seedlings. 2. R. H. Betteridge, Esq., Juliet; Queen (Willison); Sir J. Paxton. 3. H. Steward, Esq., York, Catherine; Queen (Willison); King (Willison). 4. Mr. Hepworth, Nos. 321, 136, 54.

One of the worst flowers in the room was Adonis. The colour had run down in a surprising manner, and we looked in vain for another. This was in Mr. Coleman's. Surely this must be an exception. Connected was the exhibition of the Cambridgeshire Horticultural Society. Among other subjects we noticed Pimelia Hendersonii. *Roses*:—Charles Duval, Geant des Batailles, Jules Margottin, Chenedole, and Devoniensis. *Azaleas*:—Apollo, Green's Peach, Iveryana, Extranii, and Duke of Devonshire. *Pelargoniums*:—Attraction, Forget-me-not, Sanspareil, Virgin Queen, and Louis Milliez. The plants occupied the whole of a large tent, and the exhibition was one of the best conducted we ever had the pleasure of attending.

NORTHERN COUNTIES CARNATION AND PICOTEE SOCIETY.

THROUGH the kindness of the secretary, we are happy to inform our readers that this society will hold their Annual Exhibition, in conjunction with the Bury Floral and Horticultural Society, on Wednesday, the 15th of August, in the Lecture Hall of the Athenæum.

Everything bids fair for a most healthy and vigorous meeting of our northern friends; they have already received (up to this date, May 22nd) £27 in contributions. Exhibitors who grow 150 pairs, or more, of carnations and picotees, are required to subscribe 21*s*.; below that number, 10*s*. 6*d*. We have also pleasure in announcing that the committee have extended the day for receiving subscriptions to the 10th of June.

We have only to add the names of John Ormond Openshaw,

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Esq., as secretary; Mr. John Holland, of Bradshaw Gardens, Chadderton, as treasurer; and Mr. Robert J. Kaye, as secretary, whose names alone guarantee everything that can be done to make the exhibition one worthy of the patronage of every lover of these floral favourites.

MY SMALL GREENHOUSE.

Mr. Conductor,—I was, I must say, somewhat surprised that the few notes under the above heading were not inserted. I suppose, however, it was because I was very late. [Quite correct, your communication did not arrive till the morning of the 29th.] However, you shall not have to complain in future.

A great number of flowers have come and gone since last month. The bulbs, tulips, hyacinths, etc., are all over, and I have had the pots plunged into a border, so that they may become properly matured. A few primulas still are in bloom, and I have a nice collection of young seedlings just pricked out round the edges of pots. Cinerarias are very fine; some seed I gathered myself has produced a good variety, and these alone have rendered the house gay. I mean growing a few large specimens next season, and for this purpose shall take cuttings which, if put in early, will produce what I require. They may be planted round the side of a pot with a little sand. This has with me been a most favourable season with respect to green-fly, and a little fumigation has kept the enemy in the rear; I suppose I shall be more troubled when the weather becomes milder. At the spring exhibitions there were some splendid novelties, although I see Mr. Dobson kindly gave a descriptive list on p. 77. Many of the hard-wooded plants are promising bloom, and will be out before June. Some small specimens of epacris, Azalea Indica, acacias, hoveas, daphnes, etc., all appear likely. Some fuchsias have been making growth, although the weather has been very sharp. Balsam seed and also cockscomb seed I have sown in boxes; and when I went round this morning, the former were pushing through. I find both of them invaluable ornaments when the hot sun has driven most of the greenhouse occupants into the shade. When large enough I shall plant them four or five in a pot, until they have made considerable advance. I have several climbing plants on trellis-work at the back, a passion flower, or Passiflora cæruleo racemosa This is one of the prettiest, and, being a very free bloomer, suits my purpose. I train this along the whole of the summit next the glass, and have to cut it pretty liberally, otherwise it would get too large. I have a very handsome Hoya carnosa, and this, ten years old, is

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filled with bloom. I also train this along the trellis almost immediately beneath the passiflora. Besides these, I have several sorts of tropœolums. These can scarcely have too much air. Ordinary potting soil is all that is requisite.

The directions to be followed out this month may be given in a few lines. All those plants which are in a growing state should have every encouragement, by liberal watering and a moderate temperature. Syringing keeps the plants clean, but should not be resorted to unless the weather be open and mild. Air must be admitted both on the top and sides. Arrange the plants, contrasting not only the colours of the flowers but of the foliage also. Insects must be fumigated. Sulphur is a good thing for the red spider. Green-fly must be checked on its first appearance, not when the pests have sucked the nourishment from the plant. May is peculiarly favourable to the pruning of many greenhouse plants—indeed, it is useless to prune after the new wood is framed. Acacias, epacris, and azaleas should all be treated this month. Repot when necessary, using clean pots and plenty of drainage.

NOTES AND QUERIES.

[We shall feel obliged by any Correspondent or Subscriber forwarding answers to any of the following queries.]

TULIP SOCIETIES should send in their reports not later than June 10th, the earlier the better.

OPINION ON FLOWERS.—S. Hale: Your seedling pansy, although a nice, fresh-looking flower, is not so good as many yellow grounds already out. J. D.: Mr. Allestree, of Draycott, will kindly give opinions on tulips. Mr. Hepworth, of Lea Bridge Road, Leyton, will give opinions on polyanthuses, pinks, tulips, etc. Mr. Dobson, of Woodlands Nursery, Isleworth, will give opinions on cinerarias, pelargoniums, fuchsias, and pansies, which shall be inserted when requisite in our pages.

STRAWBERRY MULCHING.—In answer to a correspondent. If your strawberries have been planted out, and not protected, they will in all probability be weak. If so, he had better use the best decayed manure he has got, and on that place a little sifted earth. After a short time, press the whole down with a spade, and cover with clean straw. Strawberries would be very likely, if not carefully treated, to taste of the fresh dung.

Mr. Editor,—Would Mr. Allestree be kind enough to say whether or not the Pilot, which he noticed (page 353, "Midland Florist," 1858) as a feathered variety, and of which he had purchased the whole stock, has answered his expectations? if so, how can it be obtained? Yours, etc., A SOUTHERN TULIP GROWER.

WORK TO BE DONE—JUNE.

Auriculas must be carefully looked over at the commencement and at frequent intervals during the month. The green-fly, which, if allowed to make a head, will otherwise be very destructive. Give air freely, and water moderately.

Carnations and Picotees.—Great care must be exercised by those who intend to exhibit. Tie up to the sticks the blooming shoots; disbud where required; remove any top soil, and add fresh, consisting of two-thirds rotten manure, and one-third good loamy turf. When required, give abundance of water.

Chrysanthemums.—Specimen plants, for large blooms, are now getting very strong, both in borders and pots, and require strict attention in tying up. Carefully take out the laterals, or side shoots, as soon as they appear; and in doing so, do not injure the foliage if you can avoid it. A slight watering with liquid manure will help to push them on, especially the pot plants. Should green-fly or mildew appear, recourse must be had to tobacco, soft or sulphur water, not made too strong; and if the head can be dipped into this solution, it will stop it immediately; but if the solution is too stiff for dipping, put it on with a sponge or brush. This should be strictly attended to throughout the year. It often happens with me, when the plants get a little diseased, that, in seeking for insects, the birds pick out the heart of the plant, which does it great injury, as the crown bud is lost, and a lateral seldom produces so fine a flower. Those who prefer quantity to quality of bloom should attend to stopping and tying out, as soon as the plants show five or six clear joints in the laterals, and should continue stopping up to the end of July, giving liquid manure every day. Border plants should be carefully pegged down when young, it saves so much trouble in tying, and they bloom shorter; but by no means attempt it if they are too strong, as they are sure to snap off at the shoulder. If they have been neglected, tie them up and stop them. Open the centre well. If four or five in a bunch, the middle is sure to fill up. Serve border pompones the same. Put in plenty of cuttings of each. They will be found very useful in autumn. Slightly fork up the surface of the borders round the plants, to prevent the rain running off the roots. Break the crust of the pots, and if any open round the edges, fill up the cracks with a little fine earth.

Cinerarias.—These being now nearly over, a sufficient stock should be secured for next season as far as possible, in order to encourage the growth of young shoots. Do not cut them right down, as is usually the case, but only take the seed-pods and stems off. If the plants are cut too low, the wet continues in the stem, and ultimately rots it and the roots. Any young plants that can

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be procured may be potted off into small pots, and put into a cool frame, looking well after the mildew, which they are very subject to this time of the year. Seed may be sown, if not already done. —JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Dahlias.—See directions given in last number.

Fuchsias—These will be rapidly coming into flower, and must be well supplied with water, occasionally using liquid manure. The plants must also be well shaded during the day. Young cuttings may still be made into plants, if propagated at once.—JOHN DOBSON.

Hollyhocks.—Go over the plants early this month, removing all, except three, two, or one blooming spike, according to the variety and strength of the plant. Water when required. Stakes must be forced to each plant to which the spikes should be secured as they advance. The height of the stakes need not be more than three feet from the surface of the ground.

Hyacinths.—The seed pods should be removed, and the tubers taken up immediately the foliage turns yellow.

Pelargoniums.—See that the plants are pretty liberally supplied with water. They should be watered in the morning: if watered in the evening, and the house is closed, or partially so, the moisture rises, and causes the flowers to damp off. See well to the shading, as the sun is very hot and drying. Air may be abundantly given, and damp the paths, etc., round the house once or twice a-day. Towards the middle and latter end of the month, many plants will be going out of flower; remove them out of doors to ripen the wood; but if rain comes on, they must be placed in a frame or some other place where they can be protected from the heavy rains. Late plants should receive their final tying out and regulating. If you intend to add any varieties to your collection, visit the nurseries or flower shows, and select and judge for yourselves.—JOHN DOBSON.

Pansies.—Abundance of water must be given to the general stock on dry days. To insure plenty of stock, continue to propagate as quickly as the cuttings can be obtained. Place them in a shady part of the garden. Good blooms cannot be obtained now in this part, unless there is a continuance of dull weather. Keep the buds clear from weeds, and occasionally stir the surface of the soil.—JOHN DOBSON.

Roses.—Liquid manure-water may with advantage be given to roses. Disbudding must be practised, as recommended in last year's volume. Suckers will be coming up from the briar, but these must be vigilantly destroyed. Green-fly must be kept down by careful syringing. Tie out such as require it. Those in pots, which have done blooming, may be removed to a north border to recruit their strength.

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EXHIBITION FLOWERS.

No. II.—The Carnation and Picotee (page 19).

Best in Beds or Pots.—From a communication I received from an amateur, I am induced to quote the following paragraph, which, on reading, I copied into my *Index res.* I cannot give the authority, but believe it to be a writer in the *Chronicle.* He says, "The first plan (pots) is generally adopted with first-rate, and often with common flowers; but I think the practice is of very questionable utility. The advantages offered by pot culture are—the economizing the soil, which is often very artificial in its character, the exclusion of wireworms, which can of course be effected more certainly in a pot than in a flower-bed, and the ease with which layering can be performed, and other manipulations in reference to the plants carried on. Now, there are disadvantages which must be balanced against these. Pots are in constant need of watching, lest they should become too dry, and yet, on the other hand, if often watered, the soil is reduced to an uncultivable mass, requiring liquid manure to restore its properties. Nor do the plants ever acquire the vigour in pots, which they gain in the ground. As to soil, any good loam will grow carnations well, and a small bed may be easily made of any material which it is thought desirable to use. Wireworms may be carefully searched for, or, what is best, never plant in soil which is pestered with them. To the novice, I would recommend planting in beds, in rows two yards apart, to allow of easy access, and the plants a foot from each other. The carnation is impatient of much wet, and a well drained spot should therefore be chosen. For the same reason, deep planting must be avoided. If you prefer the pot system, let the pots be large, with good drainage. Oyster shells are excellent for this purpose."

Pots.—There are a great many so-called carnation pots—all sorts of shapes, all sorts of methods, too, for the proper accomplishment of drainage. I can, however, affirm, after many years' experience, that nothing is better than the common pot neither too large or too small, and the method of planting singly, in eight inch pots, has answered perfectly.

Disbudding and Training.—In May, perhaps late in the month, the plants will commence spindling, or throwing up their blooming stems, and they should then have sticks carefully placed. It is surprising, too, what a length of stick some varieties will

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require. All decayed foliage should be removed, and, as the shoots advance, they must be watched and tied. Of course, there will be too many shoots for blooming; and the side ones may be removed, leaving the main shoots only. Early in July they must be disbudded. The number of blooming buds to be left, is a matter depending mainly on the variety. Mr. Dodwell, one of our first cultivators, says: "Those unacquainted with the several varieties, will find some difficulty in this operation, as the practice to be followed depends so much upon the habits of the flowers. If full, and of strong growth, three buds may be left; if thin, two buds, and if of weakly growth, one bud only. As a rule, the buds to be left will be the main buds, and those proceeding from the third and fourth joints, counting from the top, but the operator must be guarded in his selection by the appearance of the buds, their vigour, healthiness, regularity, and form. A full flower may be expected, where the young bud presents a broad obtuse top, whilst a thin variety is generally indicated by a sharp, and long-pointed bud. . . As the buds swell they will require tying; for this, we prefer strips of soft bast-matting." I, for my own part, have used thin strips of bladder. The reason why the calyx is tied round, is, that the pressure of the petals inside, frequently splits the calyx in one place only, and the petals oozing out, as it were, from the aperture never become perfect flowers, but always out of shape. In some varieties it is almost absolutely necessary to split the calyx down, but, where possible, this should be avoided. For the proper supporting of the petals, a collar of cardboard should be attached; this should not press on the calyx, but should be quite loose, and may be supported by a piece of writing-paper. If they are allowed to press on the calyx, they will be liable to destroy the form. Cards for this purpose may be obtained of many respectable seedsmen.

Shading.—Whether you exhibit or not, the production of fine specimens, either in beds or pots, cannot be attained without shading. Sun and rain, both alike prevalent, will speedily destroy the fine blooms.

Properties.—The acknowledged properties already published I can only repeat. *Carnation.*—The flower should not be less than two and a-half inches across. The guard or lower petals, not less than six in number, must be broad, thick, and smooth on the outside, and all the rest as well as they must be free from notch or serrature, and lap over each other sufficiently to form a circular roseate flower, the more round the outline the better. Each row of petals should be smaller than the row immediately under it; there should not be less than five or six rows of petals laid regu-

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larly, and the flower should rise and form a good bold centre or crown, and in quantity should form half a ball. The petals should be stiff and slightly cupped. The ground should be pure or snow white, without specks of colour. The stripes of colour should be clear and distinct, not running into one another, nor confused, but dense, smooth at the edges, and well defined. The colours must be bright and clear, whatever they may be; if there be two colours, the darker one cannot be too dark, or form too strong a contrast with the lighter. With scarlet the perfection would be black; with pink there cannot be too deep a crimson. With lilac or light purple the second colour cannot be too dark a purple. If the colours run into the white and tinge it, or the white is not pure, the fault is very great, and forming spots or specks are highly objectionable. The pod of the bloom should be long and large, to enable the flower to bloom without bursting it. But this is rare. They generally require to be tied about half way, and the upper part of the calyx opened down to the tie of each division; yet there are some which scarcely require any assistance, and this is a very estimable quality. *The Picotee.*—The properties of form are similar to those of the carnation, but the distinction between carnations and picotees is, that the colour of the former is disposed in unequal stripes, going from the centre to the outer edges, and that of the picotees is disposed on the outer edges of the petals, and radiates inwards, and the more uniform this is disposed the better. Whether it be very deeply feathered at the edge, like the pattern of a heavy feathered tulip, or an even stripe, not wider than the thickness of the petal all round the edge, or something between, it is only necessary that it be uniform, that none of the feathery marks have a break, and that there shall be as much width of white as colour seen on the petal at the deepest part of the feather. It is not necessary that the feather be the same width all the way round, but every stripe which does not reach the edge of the petal is a blemish.

THE PHYSIOLOGY OF THE TULIP.

[SECOND ARTICLE.]

THE physiology of the tulip has not engrossed that attention which it deserves. There are many peculiarities attached to it, which the most learned of botanists have not attempted to unravel. How mysterious is Nature's work. Sow a pod of seed from a rectified tulip, and there is every reason for stating that nearly all will bloom for the first time what is termed a breeder.

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I have an apt illustration of this. Six years ago, I crossed two feathered Claudianas with a feathered Kate Connor, and out of nearly sixty which have bloomed, only one bloomed rectified, all the rest breeders. Again, I have sown seed taken from a breeder, and only one has bloomed in the breeder state; all the others very fine, and scarcely one to throw away.

Another important matter is, from whence does the colouring matter come? Examine a stem cut off under the base of the flower, and magnify it, and you will see an immense number of pores through which the bloom is nourished. Until this season, I was of opinion that there were seven conduits to convey the nourishment and colour to the bud, six in a circle for the petals, and one in the centre for the pericarpium, but this proves utterly false. Put a thin slice of the stem to a powerful microscope, and, as I before stated, the pores or openings are past counting. The discolouration of the stamens is another puzzle to all. There shall be some stamens perfectly pure, whilst others are stained, all in the same flower. Many tulips are slightly stained on the top of the stamens, and but few perfectly or strictly pure. At the opening of the bloom all is right, but after a lapse of a few days, discolouration begins. In those blooms which are prolific in pollen they become almost black, and those only are the purest which contain little, if any. Cut up a stamen of a flower that is very much discoloured, and you will perceive in the centre a very large tube or canal, extremely full of colour, and that stamen is connected with the anthers by only a point similar to that of a needle, and in my opinion this colouring matter, being so dense and in large quantities, overflows at the point of connection, and discolours the stamens, in proportion to the size of the tube and quantity of colouring matter. Take up one which has the purest of stamens, cut it through the centre, and the tube which conveys the colouring matter is scarcely discernible to the naked eye, much more the colouring matter. There is also a disposition in nearly every tulip to become impure as age advances, and whether this arises from the colouring matter being in excess of the wants of the flower that it leaks (if I may be allowed to use the term), and runs down the stamen. If such is not the case, how is it that in many blooms the stamens are only discoloured on one side, and, as I before stated, only partially, some being pure and others not. This, I think, is a proof that the leakage takes place where the stamen is connected with the anthers; therefore, it runs down as a body of water would do in one channel, and, if impure, will leave its impurity in the channel down which it flows. If this were not the case, the whole of the stamens on every side would be of one colour, and stained equally.

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It is of great importance in raising seedlings that those flowers should be selected for that purpose which contain little pollen. If you examine Claudiana and Kate Connor, the anthers will be very meagre of pollen, scarcely as much as will cross more than two or three pods; and as I can speak from experience that those which I have raised from the cross are the purest that ever I raised, and almost without exception first-rate, as many can bear testimony who have seen them this season; and I have not seen the slightest disposition for the stamens of any of them to discolour even slightly, I think it will be evident that the discolouration is from natural causes, and, like the human family, have some hereditary tendency, and that the discolouration proceeds from the fertility of the flower, and if only slight, it ought not to be a disqualification in a stand. There are worse things looked over than this.

I trust that these hints and suggestions will induce some of our tulip growers to pay more attention to this portion than what they have hitherto done.

Cheetham Hill, near Manchester. JOHN SLATER.

OLD FAVOURITES.

CULTIVATION OF THE HONEYSUCKLE.

MR. EDITOR,—It may seem absurd to intrude myself into your pages with an article like this; but while you florists are dilating on your tulips and your carnations, your roses and your dahlias, pray let us have a little other matter. I may here announce that I shall, monthly, give a short paper on some old favourite. What a thoroughly English flower the honeysuckle is. What a many associations it brings. What a many times have we wandered among the wild country, and seen it clinging and clustering round the rural home. What poetry has been written, and what a great deal more has been *felt*. But to commence. The botanical name, I believe, is Periclymenum, and there are several varieties. The Virginia or trumpet honeysuckle; then there is the Dutch or German variety, approaching in manner of growth, etc., the English woodbine. There are others, and many new hybridized varieties. All, however, are attainable at a small cost.

PROPAGATION.—Layering is the mode generally adopted. Any number of shoots of the lower part may be laid down, and slightly broken, the ends shortened, and they will readily strike root. The best time for doing this is in the autumn, and they will be ready for removal the following latter end. Of course, they must then

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be planted in a nursery-bed to attain size and strength. Cuttings are also easily taken. September or October is the season. They should be about ten or twelve inches in length, and a great quantity may be taken, if required. One out of every two is pretty sure to succeed. The plants will also require a year's growth in the nursery-ground.

Soil.—I don't find any difficulty in this. All soil seems alike suitable. Clay and gravel are both productive of fine specimens.

Form of Growth.—Mr. Paxton in, I think, the "Magazine of Botany," gives the following suggestions:—"Possessed of such sterling charms, it ought to be cultivated in the gardens of all, whether peasant or peer, and in every variety of form which its nature will allow. As it is exceedingly accommodating with regard to treatment, it seems much to be regretted that in most cases it is merely grown in those artificial circumstances where a wall, or a trellis, or something equally formal, is afforded for training it over. Supported by a pole, so as to compose a pillar, it is hardly ever to be witnessed; pruned into a dwarf bush, and thus making a fine border shrub, it is still seldom seen; trailing over rock-work or a rocky bank, we have never yet observed it; nor have we ever noticed it planted thickly as a bush, and forming entangled beds, nor growing amongst ivy, nor planted extensively to twine round the stems of trees in shrubberies, nor covering bushes of hawthorn, or similar plants in the ruder parts of pleasure-grounds or parks; nor in more than two or three places pinned to a standard of four or five feet high, and developing a large half drooping head, which almost sweeps the lawn on which the specimen stands. And yet for each and all of these objects it is peculiarly well adapted, while its treatment, according to these several plans, would in itself give a great and delightful variety to a pleasure garden." For the cottage or villa porch, or for an arch across the garden walk, to me, is one of the most favourite methods. Liberal pruning, in order to induce abundant flowering, would be required; training also will be needed, keeping the plants clear and from becoming an entangled mass. Like roses, liberal pruning will be productive of fine and abundant flowers. A standard honeysuckle is my next favourite; I have one about ten years old, which is now the admiration of all; it was formed by selecting a fine strong plant of the trumpet variety, and planting it in the desired position. It was trained to an upright stake, nearly seven feet high, though, if I were to grow another, I should only take it five or five and a-half feet; when it has reached nearly the top it should be stopped. By this means a standard head will be produced, and this again must be pruned back, always stopping irregular branches. I at first used a fine top as a stake, but at

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the end of four years I found, on my going round my garden, that a strong wind had blown it down. A stronger stake was applied, which still remains. Iron has been suggested, and would have saved me trouble. Gardeners generally, that is amateur gardeners, do not possess large domains, otherwise I have no doubt that to mass beds would be effective, or to allow the plants to run rampant over hawthorn bushes; but not having had space myself, I never tried these modes. I have, however, tried it as a dwarf shrub. Constant pruning, or rather stopping, is the only way of obtaining a large and compact mass of bloom, looking almost like a large pelargonium. At Worsley, I saw a splendid rockery; either the plants were small, and were placed among the rock-work, or else the rock was placed here and there on the shoots. The effect could scarcely be imagined. Plants on poles are also very ornamental, but I never tried or saw any specimens. I have, I doubt not, exceeded the space I intended to have occupied, but should this prove acceptable, I shall be happy to notice in the August number another neglected plant—the Potentilla.

A GARDENER'S ASSISTANT.

Hendon, June 20.

MIDLAND COUNTIES TULIP EXHIBITION.

THIS meeting was held, May 31, in connection with the horticultural exhibition, in the park at Bramcote, near Nottingham, kindly placed at the disposal of the committee by the proprietor, J. S. Sherwin, Esq. The tulips were numerous, including many first-rate specimens. The collection of fuchsias, pelargoniums, cinerarias, calceolarias, azaleas, ferns, variegated-leaved plants, were very fine. Roses in pots, bouquets, vegetables, etc., were very good. The South Nottinghamshire Yeomanry Cavalry band played some favourite pieces during the afternoon, which unfortunately turned out wet; the company, notwithstanding which, was numerous and fashionable. The following is a list of the prizes for tulips, and our observations are included in brackets:—

TWELVE BLOOMS.—Rev. S. Creswell, with Aglaia, Vicar of Radford (very fine), Duke of Devonshire, Kirke White, Duke of Devonshire (feathered), Lady Denman (pure and very fine), Sarah Ann, Merit, Miss Edgeworth (fine Triomphe Royale), Great Britain, Prince of Wales (feathered byblœmen, quite pure), Rebecca (delicate feathered rose). 2nd. Mr. Allestree.—Triomphe Royale, Chellaston Beauty, Aglaia, King Robert Bruce, Sovereign, Miss Grace (scarlet feathered rose, fine), Vivid, Napoleon (very fine), Victoria Regina, Groom (flamed and quite pure), El Dorado (a distinct and correctly flamed bizarre), Sarah Ann, seedling, flamed bizarre (quite pure, rather heavily but correctly

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and beautiful plant in its order. . It forms large terminal imbricated heads of broadish glaucous-tinted green, lanceolated leaves partially decurved, as in many allied species. In matured specimens the flower-stem often attains sixteen feet in height, forming a pyramid of white lily-like blossoms, which eventually assume a red tint. It is said by those who have been privileged with a sight of the living growth in its beauty, that there is no European Liliaceous plant to compare with this, not excepting *Lilium giganteum*, which would often appear a dwarf by its side.

CHRYSANTHEMUM MISS AUGUSTA.—A beautiful and finely effective variety of the large-flowered section; showing a neat, yet free, vigorous, robust habit of growth, attaining by good treatment three feet or more in height. The flowers are a good medium size, of a very pleasing or distinct lemon or primrose yellow, with remarkably large, broad, smooth, unnotched petals, elegantly incurved to the centre. It is a very prolific bloomer, expanding the side blossoms very nearly equal with the terminal one, and answers equally well for standard or dwarf training in the open borders, and for portable specimens in the greenhouse or conservatory. It appears in perfection about the second week in November. Its merit as a desirable addition to all collections may be inferred from having had six premiums awarded to it in the recent exhibitions of 1859; the last of which was a first-class certificate at the Crystal Palace in November. The stock was purchased from the raiser, Mr. Holland, gardener to R. W. Peak, Esq., Spring Grove, Isleworth. As a scarce shade of colour within its section it will form a welcome addition for competition trays of cut flowers, and its great width of petal will at once add a distinguished feature to all groups.—*Catalogue of* E. G. HENDERSON AND SONS, *St. John's Wood.*

TULIPS OF 1860.

THE last Number of the "Midland Florist" is full of interesting matter to the tulip grower, and as this Number will contain the report of a number of exhibitions, I will endeavour to be as brief as possible in my notes of the new or little known tulips I have observed during the past season. You have fully reported the National with the assistance of the Rev. S. Creswell, with notes on the new flowers; but I will begin with it, observing only those which appeared to me the most striking. *Miss Creswell* (Creswell), a fine feathered byblœmen, dark purple, pure white as shown, small, not being fully grown, and from an offset; but when fully developed, likely to be a first-rate variety. *Sir J.*

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Paxton, feather broke from a breeder this season, dark purple feather, with fine yellow. *Gibbon's No.* 1, or *Mrs. Allestree*, a fine rose breeder, requires a fortnight's growth after it opens to be in perfection; the broken flower came first-rate, with a rosy-scarlet feather, and likely to be the best feathered rose in cultivation; the bloom was accidentally damaged this season. *Queen of England* (Parker), a fine rose breeder; the broken flower is, however, a first-rate feathered byblœmen. Seedling 362 (Hepworth), a light feathered bizarre, pure and good. Seedling 111 (Hepworth), feathered byblœmen, lightly marked, small, but good. *Rising Sun* (Hepworth), Catafalque shape, a fine feathered bizarre. Seedling 135 (Hepworth), rose breeder, fine shape, and good. *John Linton*, a fine light-feathered byblœmen, shape just what a tulip ought to be; a seedling of R. Headly, Esq. *Demosthenes*, feathered bizarre, rather too long. *General Havelock*, a grand feathered bizarre, large, fine shape. *Sarah Headly*, fine short cup, perfectly pure, a feathered rose when young, inclines to a byblœmen tint as it ages. *Celia*, not distinguishable from Heroine. *Mary Jane*, delicate feathered byblœmen, fine form. *King* (Strong), was shown by Mr. Hunt as a delicate feathered bizarre, and fine shape. *President* (Hepworth), a red-feathered flamed bizarre, good shape, but rather streaky. *Mrs. Pickerill*, a very steady feathered byblœmen, rather creamy at opening, but bleaches; the three outer petals are rather pointed, stand out, and are slightly recurved in the flower. Mr. Pickerill showed at the Midland Counties, the three outer petals were not pointed, and did not stand out, and was as fine a feathered byblœmen as ever one saw; it has made a little noise in the Midland this last year or two, and this is all I can say about it. Seedling (Headly), feathered byblœmen, rather heavy white, fine, shown in his stand of six at the National. *Pactolus* (Headly), a fine fourth-row red bizarre, with a Polyphemus-shaped cup, first-rate. Seedling (Headly), a rare breeder, very large, shape perfection, with a good base of pure white.

On the morning after the National Show, a few friends, ourselves included, visited the residence of R. Headly, Esq., of Stapleford, near Cambridge. Unfortunately we had only about an hour to spare; it is a brilliant spot; it would do any florist's heart good to see it, and perhaps would cause him to exclaim—

"For ever here my heart shall dwell."

The many greenhouses filled with the choicest plants, many rare specimens of Coniferæ and shrubs, and the extensive beds of the choicest tulips under marquees, the admirable order and neatness that pervaded every part, impressed our mind with the idea,

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that for the size there was not another garden in Europe to be found equal to it. We had only time, however, to run rapidly over the tulips, and the following are the few hasty observations we were able to make:—*Paragon*, a fine feathered bizarre. *Adonis*, feathered byblœmen, very much like John Linton, perhaps not so good a shape. *Commodore*, flamed bizarre, fine, and pure. *Sir J. Lawrence*, feathered byblœmen, fine, but the three outer petals stand rather out. *Blinkbonny*, an extra fine feathered byblœmen. *George Lightbody*, a fine feathered bizarre. *Semiramis*, a fine-feathered heavy rose. *Hermione*, feathered rose, fine shape. *Endymion*, a fine byblœmen breeder. *Regina*, a fine rose breeder, immense base. We may just observe that we know from observation that the finest breeders do not break in the best varieties, but rather the reverse. *Bizarre* (seedling), like Pilot, breaks from a breeder like Pilot. *John Thornily*, a fine feathered byblœmen. *Indispensable*, a fine feathered byblœmen. *Phœnix*, a fine flamed bizarre. *Lord Bloomfield* (Ellis), a good feathered and flamed byblœmen. *Titian*, a pretty feathered and flamed bizarre, lightly marked. *Better-than-Polyphemus*, a long name, like a first-rate feathered Polyphemus, and quite equal to that variety, if not better; appears very steady, and in our opinion Mr. Headly should give it another name. *Lady Clifton*, raised, we believe, in the neighbourhood of Nottingham; we saw it extra fine on Mr. Wood's bed at the Coppice a few years ago; it is a feathered rose, inclined to flush. *Proserpine*, we saw the bloom exhibited by Mr. Headly a few years ago at the Horns Tavern, Kennington, and considered it the finest and largest feathered byblœmen we have ever seen; in fact, what a first-rate Duke of Devonshire is amongst feathered bizarres it is amongst feathered byblœmens. We were surprised to see that it breaks from a very impure breeder. *Regalia*, a fine large feathered rose. *Jason*, a fine light bizarre, much like Dr. Horner. *Neptune*, fine feathered bizarre.

With a few more observations we shall have concluded our notes taken this season. *Haigh's Violet Amiable* is a good and apparently steady feathered byblœmen. *Sir J. Paxton*, flamed on our bed, was first-rate, the bulb received last year from Mr. Willison; it also broke from a breeder this season, as fine a feathered bizarre as we have seen. *Napoleon*, a scarlet feathered rose, the shape might be better, but may be much improved with a little banding; a distinct variety in our fourth stand at Cambridge, and our second stand at the Midland Counties, ought to be in every collection when attainable. *Miss Grace* (Marshall), a rosy-scarlet feathered rose, generally grows rather small, but in our pan at Bramcote a good fair size and first-rate. *Salvator Rosa*

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(Allen), broke from one of Gibbon's breeders; there is a variety broke at Nottingham called *Kirke White*, which appears to be identical with it. *Victoria Regina*, flamed; Groom's was perfectly pure and bleached in our stand at Bramcote, and for shape and marking is first-rate. *Abbott's Cow* or *Bull* is a fourth-row feathered bizarre, something between a Sovereign and Magnum Bonum, the feather scarlet colour; it bloomed first-rate on our bed this season, but with a split petal. It owes its name to us offering Mr. Abbott £5 for the root a few years ago, or else a yearling calf; it is now proposed to alter its name to that of J. Adkin's eldest son, Ira. *Gissipus* with us was too heavily marked, a feathered and flamed bizarre, but first-rate in Mr. Barber's stand at the Midland Counties' Exhibition.

The foregoing observations, written from notes made on the spot, are, to the best of my judgment, correct, and as such are offered to the readers of the "Midland Florist."

T. ALLESTREE.

Draycott, June, 1860.

AMATEUR TULIP SOCIETY.

THE seventeenth annual exhibition of this influential society took place at the Greyhound Hotel, Dulwich, Surrey, on Monday, the 28th May. The show was a very good one, and the flowers generally were in first-rate order, particularly those from Mr. Headly, of Stapleford, who contributed a large collection of fine specimens, in addition to his competing stand, and whose seedlings attracted much notice and admiration.

The following is the award of the judges, Messrs. E. T. Clark, N. Goldham, and — Williams:—

CLASS A, GROWN MORE THAN FIVE MILES FROM THE GENERAL POST-OFFICE.—1. R. Headly, Esq., Stapleford, near Cambridge: Polyphemus, Hermione, Sir John Lawrence, Leonora, Adonis, Pactolus, Lord Bloomfield, Seedling, Sarah Headly. 2. Charles Williams, Esq., Clarence Cottage, Tottenham: Walker's Duchess of Sutherland, Dr. Horner, Triomphe Royale, Claudiana, David, Pilot, Selim, Crook's Mary, Napoleon. 3. N. Norman, Esq., Woolwich: Anastasia, Maid of Orleans, Perfection, Walker's Duchess of Sutherland, Cotterell's Eliza, Aglaia, Orchard's Sir C. Napier, Triomphe Royale, Mrs. Smith.

CLASS B, GROWN WITHIN FIVE MILES OF THE GENERAL POST-OFFICE.—1. B. Williams, Esq., Stamford Hill: Hamlet, Lalla Rookh, Optimus, Walker's Duchess of Sutherland, Groom's

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Duchess of Sutherland, The Recruit, Heroine, Vivid, Fair Rosamund. 2. G. F. Delaforce, Esq., Ely Villa, Peckham: Meteor, Claudiana, Strong's King, Ariel, Hamlet, Duchess of Sutherland, Matilda, John Kemble, Elizabeth. 3. F. Were, Esq., Canal Bank, Camberwell: Aglaia, Slater's Earl of Warwick, Groom's Mr. F. Perkins, Triomphe de Lisle, Vivid, Julia, May's Prince Albert, Walker's Duchess of Sutherland, Dunn's Mrs. Lindsey.

Seedling prizes were awarded to Mr. Headly, for a byblœmen, named Indispensable, and a rose, Mary Thorniley.

THE TULIPS AND THE NATIONAL.

Lord Raglan.—A fourth-row flamed feathered bizarre, something in the way of Duke of Devonshire, but ex. ex., and may safely be said to be one of the finest flamed bizarres we have in cultivation. This is one of Mr. Groom's flowers. Exhibited 1856, 3; 1860, 1—Total, 4.

Madame Catalini.—A second-row rose, coming both feathered and flamed; good colours, petal, and white. There are numerous statements that Ponceau Tres Blanc and Ceres Blanche are identical, but this is incorrect. The following defence is given in the "Horticultural Magazine." It has been often unjustly confounded with Ceres Blanche and Ponceau Tres Blanc. As we have grown them, it has been impossible to mistake Catalini for anything, for it is like nothing else, and we might say the same of Ceres Blanche, for while the former is a tall second or third row flower, we never saw the latter too tall for the first; nor is the flower so tall, bold, or striking. The only two beds in which we have seen the true Catalini grown under its own name was Mr. Strong's and Mr. Brown's. We have in many others seen the right flower called Ceres Blanche and Ceres Blanche called Catalini. In short, it has been too usual to confound the one with the other; and in one establishment the two stocks were placed in the same bag, some say by accident, but we have been told that it was at the suggestion of somebody who said they were both alike. Sports there may be with tulip blooms, but we doubt very much whether they could sport so decidedly in habit and flower, too, as to form a true Catalini and a true Ceres Blanche. (Query—which is being sold at the present day?) Catalini is still catalogued as a first-row flower. Exhibited 1856, 1; 1858, 1; 1859, 2—Total, 4.

Masterpiece.—One of Mr. Slater's flowers, and decidedly

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one of the best feathered bizarres we have. Mr. Walker says "it is really a gem, and well deserving of the name; a rich yellow ground, very pure, form moderate, with a nicely pencilled black feather. I consider it the finest feathered bizarre in the exhibition" (1857). Mr. Slater very candidly says, "This variety is famous for its beautiful yellow and black, as well as its purity, but it is rather long in the cup." Exhibited 1857, 2; 1858, 1; 1859, 1—Total, 4.

PACTOLUS.—A fine red feathered bizarre, good cup, perfect form, and quite pure. This is one of Mr. Headly's sedlings, and I have no hesitation is hazarding the prophecy that it will be one of our standard varieties. Exhibited 1859, 1; 1860, 3—Total, 4.

SANS JOE, or CAPTAIN WHITE, or anything else, up to about a dozen different names.—A flower of the bizarre class of the second row. The great drawback, however, to it is want of purity. It is also not compact enough for the present day, although occasionally it may be found good even in the exhibition stage. As an occupant of the tulip-bed, however, it is a flower that should be in every collection. The colour is excellent, as is also the feathering. Exhibited 1857, 4.

ALCON.—A byblœmen, does well for a third row, tolerably pure, but too flabby and long in the petal for general exhibition. Sometimes, however, caught well. Exhibited 1857, 1; 1858, 1; 1859, 1—Total, 3.

BION.—A third-row rose feathered. Mr. Allestree describes it as "large, and a fine variety for exhibition. When young, a rose, deepening as it ages into a rosy purple." Exhibited 1856, 1; 1859, 1; 1860, 1—Total, 3.

CHELLASTON BEAUTY.—This is a first-row flamed byblœmen of average properties. Mr. Slater says it is synonymous with Maid of Athens, Grace Darling, and Lady Peel. Exhibited 1857, 1; 1858, 1; 1859, 1—Total, 3.

DUCHESS OF CAMBRIDGE.—A fourth-row feathered byblœmen, broken by Mr. Groom. The shape of this flower is exquisite, good size. The marking is not, I think, quite perfection. It must, however, be styled as a worthy novelty. Mr. Allestree, however, describes the flower exhibited in 1859 as "delicate feathered byblœmen, greasy bottom." Exhibited 1856, 2; 1859, 1—Total, 3.

EARL DOUGLAS.—A flamed bizarre, much like, if not identical with, Darius and Rufus. Exhibited 1856, 2; 1857, 1—Total, 3.

FABRIUS.—A fourth-row bizarre, broken and raised by Mr. Lawrence. Exhibited 1856, 3.

GEM (Abbott).—A feathered byblœmen of average good

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qualities, highly esteemed in the midlands. Exhibited 1858, 1; 1859, 1; 1860, 1—Total, 3.

GEM.—A feathered byblœmen, good white, and the feathering of a light rosy purple. Exhibited 1856, 2; 1860, 1—Total, 3.

[This and the above I believe to be identical; they are placed, however, as exhibited.]

KING (Strong.)—How it is that this variety is sometimes so splendidly pure, and at other times so stained, I am at a loss to conjecture; so it is, however. I have seen flowers everything that could be wished, both for purity and marking, and the same variety I have seen as foul as Sans Joe. Strong's King is unquestionably —although there have been objections made by the ignorant, who know not even the flower when they see it—one of the finest bizarres in cultivation. In many beds a flower has been grown for it that had no pretensions to the name. It is a fine yellow, with a splendid feather and flame. It is among the best formed flowers we have. The colouring of the feathering is a rich reddish brown, and the only point that it loses occasionally is by a slight sinuage in those of the petals, hardly perceivable, but nevertheless it is there to be seen whenever the flower comes heavier. The flower is the full size for its height, which is second row, though it is such a general favourite when in good character, that many place it in the first because it is conspicuous. Exhibited 1856, 2; 1860, 1—Total, 3.

KING WILLIAM.—A first-row bizarre, of excellent qualities. Exhibited 1859, 3.

LADY WILDAIR.—A flamed row. Exhibited 1856, 2; 1859, 1—Total, 3.

MRS. PICKERILL.—A byblœmen, described by Mr. Allestree as "a fine feathered byblœmen, with the drawback, however, of the three outer petals pointed and slightly recurved." Exhibited 1859, 2; 1860, 1—Total, 3.

PRESIDENT.—A red flamed bizarre, one of Mr. Hepworth's flowers, perfectly pure but long in cup. Exhibited 1859, 2; 1860, 1—Total, 3.

VICTORIA REGINA.—A feathered second-row byblœmen. Mr. Allestree says, "it opens creamy, and the outside of the lips of the petals often have a green tinge, both of which faults disappear as the flower matures." Exhibited 1856, 1; 1857, 1; 1859, 1—Total, 3.

ULYSSES.—A second-row bizarre, rared, I believe, by Mr. Brown. Exhibited 1856, 1; 1859, 2—Total, 3.

ALEXANDER MAGNUS.—A well-known flower, I believe, but I do not grow it, and cannot find any notes. Perhaps some grower will supply. Exhibited 1857, 1; 1860, 1—Total, 2.

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ANASTASIA.—One of the Chellastons, broken by Gibbon, and, I believe, styled by him as No. 10, is a fourth-row flower, and said to be identical with Vicar of Radford and Fanny Cerito. Although perfectly coinciding with the latter opinion, I must say that Vicar of Radford and Anastasia are distinct. Anastasia is not to be compared to the Vicar. Undoubtedly there are many (and I myself have been thus deceived) who have ordered from the catalogue Vicar of Radford, and received Gibbon's Anastasia; hence the dispute and mistake. The marking is not first-rate. Anastasia has been broken about twenty years. It occupies a fourth row, and comes both feathered and flamed. Nevertheless it is a flower worth possessing. Exhibited 1856, 1; 1859, 1—Total, 2.

APELLES.—A well-marked second-row bizarre. It is, when caught, an exceedingly pretty thing, and is capable of blooming among our best flowers. Exhibited 1857, 2.

BRULANTE ECLALANTE.—A third-row rose, broken by Beteral. [A gay feathered and flowered rose, very nice bottom, bright colour, pretty constant marker, and never flushes; a good second-row flower, expands well, and, although not a first-rate form in the cup, a very useful show grower.] Mr. Glenny says it has pointed petals. Exhibited 1856, 2.

CALIPH.—A first-row flamed bizarre, so much like Pilot that it would be dangerous to exhibit the two in one pan, yet quite distinct when seen in a bed. Mr. Slater believes this to be identical with Aidecamp. I believe this was first named by Mr. Wood, at the Coppice, still I do not think the flowers are the same. Exhibited 1856, 2.

COUPE DE HEBE.—A feathered byblœmen of good qualities. Exhibited 1856, 1; 1858, 1—Total, 2.

DON PEDRO.—A flower of second-rate pretensions, much like Musidora, but scarcely equal. Exhibited 1856, 1; 1859, 1—Total, 2.

ELIZA.—I believe there are two Elizas in cultivation; the one I have seen, however, is Mr. Hunt's, a splendid feathered byblœmen, of good qualities, raised and broken by that gentleman. Exhibited 1856, 2.

FRIEND, or, as it is better known, LAWRENCE'S FRIEND.—This variety is as nearly black and white as any tulip we possess, and will always be a favourite. Cup good. Exhibited 1856, 2.

GEM OF GEMS.—A fine feathered byblœmen, finely marked. perfectly pure, but too long in the cup. Nevertheless it is a splendid variety. Mr. Turner gave Mr. Willison, the raiser, twenty guineas for five roots. Mr. Slater is, I think, hard on this variety, when he says "it is inappropriately named, as its form will always militate against its being even a gem." As shown here, 1857, it

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was long in the cup, and had narrow petals, although it is pure. Exhibited 1858, 2.

GLORY OF ABINGDON.—No notes. Exhibited 1859, 1; 1860, 1—Total, 2.

J. SANDERSON.—One of Mr. Willison's flowers, a feathered bizarre of excellent qualities. The ground colour is rather pale, the feather is good round the whole of the petal. The cup is rather long, but it has purity, and every other point to recommend it, and may be truly classed as a first-rate bizarre—one of the best. It is stated to be an ex-feathered bizarre, in the style of Platoff, which, from its substance and purity, will be found one of the most desirable varieties in cultivation. Exhibited 1856, 1; 1857, 1—Total, 2.

KATE CONNOR.—A very fine light-feathered scarlet rose. The marking is generally excellent, although in the bloom shown at Cambridge it was not so good as might have been. Exhibited 1859, 1; 1860, 1—Total 2.

MARY HEADLY.—This is one of Mr. Headly's fine seedlings, of which, perhaps, no amateur has a better collection. It is a splendidly formed flower, a heavy flamed rose, but well feathered. Exhibited 1856, 1; 1857, 1—Total, 2.

MARY LAMB (Zuill).—A feathered rose, and by the Rev. S. Creswell, and other eminent growers, thought first class. It is a flower, however, which requires bleaching, and that considerably. When caught it is splendid. Exhibited 1857, 2.

MISS CRESWELL.—One of the fine seedlings raised by the Rev. S. Creswell, of Radford Vicarage. It is a byblœmen, rather light feathered. The cup is exquisite, and purity undoubted. Query—Is this the same variety as the flower which carried off the premier prize at Birmingham in 1852? Exhibited 1858, 1; 1860, 1—Total, 2.

MISS EDGEWORTH.—A flower named by Mr. Thackeray, of Nottingham. Mr. Slater and Mr. Walker say it is not different from Triomphe Royale. All I can say is, that when I saw it first, which was in Mr. Thackeray's bed, many years ago, it was so good that it was worth an extra name. In buying Triomphe Royale, buy the Miss Edgeworth strain. The Rev. S. Creswell knows this flower well; perhaps he will say which it is. Exhibited 1857, 2.

MR. J. PERKYNS.—A fine flamed bizarre, a first-row flower, raised and broken by Mr. Groom. It is strongly flamed, and of an excellent form. Exhibited 1857, 1; 1858, 1—Total, 2.

MARCELLA.—Exhibited 1856, 1.

MUSIDORA.—A third-row byblœmen, known by the name of Brown's Wallace. The variety generally known by the latter name, is very similar, but of a different purple to Salvator Rosa. Exhibited 1856, 2.

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PAUL PRY.—No notes. Exhibited 1856, 1; 1857, 1—Total, 2.

PURPLE PERFECTION.—One of Mr. Gibbon's flowers. A first-row. Exhibited 1857, 1; 1858, 1—Total, 2.

SARAH ANN.—A very pretty flower described before. Exhibited 1859, 1; 1860, 1—Total, 2.

SELIM.—A first-row flamed bizarre, a very fine bloom, was exhibited at Cambridge in 1855. Mr. Allestree says he has seen it with a stain at the bottom of the beam. The two or three blooms, however, I have had the pleasure of seeing in the private collection of a friend are pure. I question, however, whether even in this variety there are not two sorts grown under one name. Exhibited 1856, 2.

SPHINX.—A fine feathered bizarre, so much in the style of Duke of Devonshire that it is frequently stated to be the same. Exhibited 1856, 1; 1860, 1—Total, 2.

THOMAS BROWN.—A fourth-row flamed and feathered bizarre; the petal is good, colour excellent, with rather large marking. This is rather an old variety, but not often seen. Exhibited 1856, 1; 1860, 1—Total, 2.

VIOLET AMIABLE.—A splendid flower, let out by Mr. Haigh. Exhibited 1857, 1; 1860, 1—Total, 2.

[MR. EDITOR,—In your next instalment, will you please notice an error pointed out at page 172? In my description of Lady Catherine Gordon, by some means it is called a byblœmen, and should be a rose. This has been pointed out to me by Mr. Walker, of Winton, and several other friends. Mr. Walker and Mr. Hood are both dissatisfied with my notice of Dr. Horner, but at the conclusion of the article I will give my reasons for the opinions expressed. In the meantime I shall be happy to hear from other correspondents, through the medium of yourself. I might state that the article is now nearly concluded, and will be inserted in a future number.]

TULIP ADONIS.

To the Editor of the Midland Florist.

SIR,—In your remarks upon the Royal and National Tulip exhibition as held at Cambridge May 24, 1860, occurs the following observation:—"One of the worst flowers in the room was Adonis, the colour had run down in a surprising manner and we looked in vain for another." The writer's vision must have been very obtuse, as I exhibited a stand of six blooms of Adonis (but not for competition), every one of which were similar in character, "pure feather."

I also exhibited the same flower in three winning stands for

the prizes given by the Cambridge Floricultural Society, "*and shown in the same tent;*" in addition, I had also ten or more spare blooms of the same flower, which were seen by *all* or most of the tulip exhibitors.

On the following morning eight gentlemen, "amongst whom was Mr. Allestree," visited my beds, where more than forty blooms of Adonis were all standing, alike in character.

For what purpose the above observation was made is best known to the writer of it.—Yours obediently,

Stapleford, June 2. RICHARD HEADLY.

[We feel ourselves called upon for some explanation. We were very much engaged with the flowers constituting the winning stands of the National, and we most certainly did not see the other blooms. Our surprise that Adonis should even run (for we had hitherto, and do still, consider it the finest byblœmen we possess) led us into denouncing the bloom in question as the worst in the room. Comparatively speaking we are yet correct. From correspondence we have learnt that the flower was only broken this year. We have had a correspondence with Mr. Headly on the subject, and, although he will not allow us to withdraw the last sentence, in which he casts an imputation, still we believe he will give us credit that we have diligently endeavoured to court the fullest investigation.]

NATIONAL CARNATION AND PICOTEE SOCIETY.

AT the minute of going to press we are favoured with the following particulars. The exhibition will take place at Leeds in the Town Hall, under the management of Mr. T. D. Appleby. The following prizes to be awarded:—

Nurserymen: Class A, Premier Prize.—The best Twelve Carnations, and best Twelve White Ground Picotees, dissimilar.—A Silver Cup, value Five Pounds.

Private Growers: Class B, Premier Prize.—The best Twelve Carnations, to contain not less than nine dissimilar varieties, and the best Twelve White Ground Picotees, also to contain not less than nine dissimilar varieties.—A Silver Cup, value Five Pounds. Class C, Premier Prize (open to cultivators whose stocks shall not exceed 150 pairs).—For the best Six Carnations and the best Six White Ground Picotees, dissimilar.—A Silver Cup, value Two Pounds Ten Shillings.

Nurserymen: Class D, Carnations—Twelve blooms, 35*s.*, 25*s.*, 20*s.*, 10*s.* Class E, Picotees—White Ground, 35*s.*, 25*s.*, 20*s.*, 10*s.*

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Private Growers: Class F, Carnations—Twelve blooms, to contain not less than nine dissimilar varieties, 35*s*., 25*s*., 20*s*., 10*s*., 5*s*. Class G, Picotees, white ground—Twelve blooms, to contain not less than nine dissimilar varieties, 35*s*., 25*s*., 20*s*., 10*s*., 5*s*. Class H, Carnations—Six blooms, dissimilar varieties (open to cultivators whose stock shall not exceed 150 pairs), 20*s*., 15*s*., 12*s*., 10*s*., 7*s*. 6*d*., 5*s*. Class I, Picotees, white ground, ditto ditto, 20*s*., 15*s*., 12*s*., 10*s*., 7*s*. 6*d*., 5*s*.

Open to all: Class K, Single Specimens in Classes; on Cards $3\frac{3}{8}$ or $3\frac{1}{8}$ inches in diameter; 3*s*., 2*s*., 1*s*., 1*s*. Carnations, six classes; Picotees, white ground, six classes; Yellow Picotees, one class. Premier Carnation, to be selected from the stands or classes, 4*s*. Premier Picotee, ditto ditto, 4*s*.

We can only say that the good folks have our earnest support, and we hope that of every grower. Intending exhibitors should inform Mr. Appleby, whose address is given in our advertising pages.

THE VEGETABLE GARDEN—JULY.

Broccoli.—Prepare some ground for planting the latter end of the month. Manure it well if not previously in good condition, and set the plants out in rows two feet six inches or three feet wide, if fine large heads are required, leaving the plants two feet apart in the row. If the garden is small, the latter distance should be preferred, as there would be room enough to grow a row of cabbages, lettuces, or turnips in the centre, which could be cleared off in November, before the broccoli leaves attain their full growth. Begin by planting out the early sorts, finishing with the late varieties. Land that has been well manured for early potatoes would be in excellent condition, after the crop is taken off, for broccoli, and would require no further preparation or extra manure.

Cauliflower.—Transplant for autumn use.

Cabbages.—This is the season for transplanting out all varieties of this useful vegetable. Begin early in the month, and plant out all the spare land; the winter may be long, they will come acceptable when other vegetables are scarce. The method of procedure is thus:—Prepare the ground by manuring it with five or six barrowfuls of half-decayed stable-dung to the perch, five pounds of Peruvian guano, and if the ground is situated some distance from the influence of the sea atmosphere, add three pounds of common salt, dig the whole in, and rake the surface a little. Set the small sorts out, such as Early York, Early Dwarf,

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Early Emperor, eighteen or twenty inches apart. The larger sorts, as Enfield Market, Prince Albert, and Waite's King of the Cabbages should be allowed two feet each way. In planting, be careful that the tap root is well placed downward, otherwise the growth will be very slow. In a week after the plants are rooted, give them a deep hoeing, either in the morning or evening, while the dew is on. Cabbages grow faster when hoed at these times than when done in mid-day, repeat the hoeing in ten days or a fortnight at latest, whether there are weeds or not. The object is to facilitate the growth of the cabbage, not the destruction of weeds, although as a matter of course it will do this if there are any. Cabbages treated in the above way will be fully grown in six weeks after planting.

Greens and Colewort intended to stand the winter should not have any guano applied to the ground on which they are grown, as they would be too tender to endure the frost and rain. The planting out should continue during the month, as the crops are cleared off. Observe the later these transplantings are made, the closer the plants may be set, decreasing the distance by one inch per week from plant to plant.

Lettuce.—Make a sowing not later than the third week; they will continue fit for use till Christmas.

Turnips.—This is the season for sowing for use during autumn and winter. The first and third weeks of this month should be chosen for the sowings. Orange Jelly and White Stone are the best for table use; the latter sort stands the cold weather well.

Beetroot.—Thin out if not done before.

Celery.—Transplant in trenches, as directed last month. Do not delay planting beyond the second week.

Cabbage Seed.—Make a sowing of Early Emperor, Cattel's Early Drop, Pargaton, Enfield Market, or other approved sorts. They may be sown with safety the last week of the month on cold lands, but on ground at all early, the sowing should be delayed till next month, otherwise they will run up in spring.

Endive.—Make a last sowing the second week.

Scarlet Runners.—Top these occasionally, if required to be grown without sticks.

Leeks.—Transplant these the first opportunity. An excellent plan is to dig out a trench twelve inches deep, and place in three or four inches of strong manure. Fill up with the soil taken out, and plant a single row. Set the plants ten inches apart; when fully grown, earth them up to blanch.

Whatever work may have been neglected last month do it as early as possible this. Bring up all arrears. Thin out growing crops. Draw onions as soon as the tops turn yellow, lay them on their sides for two or three days in the sun, remove them in-

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doors if there is a likelihood of rain. When the tops are dry enough to pull off, do so, and put them for two or three weeks in a place where they will have from 90° to 100° of heat. They keep much better after this. Save seeds. Gather herbs when in flower; dry them in the shade. As soon as crops are gathered, clear the litter, and crop again. Leave no ground vacant. Every crop will grow quicker, and the produce greater, if hoed often. This process should never be left till the weeds grow. The object should be a rapid growth from beginning to end. If the crops are stifled with weeds in the first period of their existence, they seldom are productive. Cleanliness and deep hoeing are as necessary to a growing crop as a good soil and plenty of manure.

Market Gardens, St. Lawrence, Jersey. JAMES LEVESQUE.

WORK TO BE DONE—JULY.

Auriculas.—Repot towards the end of the month. Full directions for compost I gave at page 14 of the present year. The plants at this time (viz., repotting) will, as it were, be in a comparative state of rest. I always use pots six inches in diameter; plenty of drainage and moderately firm potting are required. Give abundance of air.

Carnations and Picotees.—Regulate the shoots, and remove some of the buds, leaving only two or three, according to the variety and strength of the plant. Leave the main bud, and perhaps the fourth or the third, preferring those buds with blunt ends to those which are more tapering. Water freely, and once a week substitute manure water. Propagate either by layering or piping; the latter is the mode generally adopted.

Chrysanthemums.—Border plants not intended for specimens or large flowers should be well tied up. The centre, if four or five in a patch, should be kept open, and the ground be slightly forked, and have a thin mulching of rotten dung, or any other decayed manure to prevent the hot weather destroying the bottom foliage, not forgetting to use the watering-pot freely every evening. Cuttings of both large and small varieties, if put in now, will come in for late blooming, and make good stock for next year also. The blight is doing its mischief freely this hot weather. Use plenty of tobacco water and soft soap, by sprinkling in the crowns when they are too strong to be dipped without danger of breaking. The large specimens should be examined every day, and all side shoots taken off, leaving three or four at top. When the crown divides, give a little liquid manure, such as cow-dung, etc. Keep tying down and stopping pompones, spreading out your plant as wide as possible. Never fear leaving the centre its share to fill up

Water twice a day this hot weather by sprinkling the foliage every evening. Don't neglect watering an hour, if possible. If five joints from last stop, stop again immediately to get a break, before the wood becomes too ripe and hard.

Cinerarias.—"What lovely specimens, and how full of bloom," was the general expression of all who saw our plants at the Crystal Palace and Regent's Park shows, and everybody who has a frame-pit or greenhouse may have just such plants. Let them purchase in August or September plants of us or Mr. Turner, or any other nurserymen they please—or they may have the plants given them, it will make no difference. Grow them exactly according to our directions, which we shall give monthly, and they may have plants three feet in next April or May. There is no secret in growing them, it is only little trifling attentions which tend to success. To many it may, and does appear almost incredible, that plants so large can be obtained from one single stem, but it is not more strange than true, and I believe they may be grown larger than any that we have yet seen, as soon as such sorts can be obtained. The operations connected with these plants for this month are necessarily limited, yet equally as necessary as for any former month. The plants are all out of bloom by the time the present number is in the hands of the reader, and when stock is required, now is the time to set about making it. Look over the old stools, and see if any cuttings or offshoots can be obtained; if so, put them into some thumb pots, using some light rich soil, and plenty of silver-sand. Put them under a handlight or in a frame, in a shady, but tolerably dry part. They will not be long before they make plants, and may be removed when they are growing, and kept shifted on gradually, keeping them in a cooler place; they will soon gain strength, and when about an inch high they may be stopped back, that is, just pinch the crown out. Any early cuttings that are struck and rooted may be potted off as before recommended; if you wish to make specimens, on no account let the plants get pot-bound. Seed may be sown now for a succession in light rich soil, using a good portion of silver-sand. The seed must not be buried deep; the pots after the seed is sown should be kept in a warm damp place, and shaded from the sun. In about a fortnight the plants will be visible, and may be hardened off as they grow; they must never be allowed to get thoroughly dry. As soon as the plants have five or six leaves, prick them off into pots, about twenty in a forty-eight pot. Mildew and black-fly are great enemies to the small plants. Now use sulphur virum, or black sulphur, if the former is seen; if the latter, dip them in soft soap and tobacco—half-a-pound of the former, and two ounces of the latter, adding two quarts of water; the soap and tobacco should be mixed with hot water, and let stand for a day and night. When well mixed

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and let settle, the plants may be immersed; it is a simple, but efficacious and safe remedy, the plants the second day after they are done may be well syringed with clear water.—JOHN DOBSON.

Dahlias.—As they grow should be held out, using good bast previously soaked.

Fuchsias.—Attention to watering will be necessary to prolong the beauty of these highly ornamental and graceful greenhouse plants. Nothing will shorten their beauty sooner than being exposed to the sun and being allowed to get dry. Manure water may be given with advantage. Late plants not in their blooming pots receive their final repotting at once. If large plants are wanted to flower in the following May or June, procure cuttings at once, strike them in a little bottom heat, if possible, and keep them gradually moving till Christmas.—JOHN DOBSON.

Flower-Garden.—Bedded-out plants will now be started off into full growth, and will require to be trained out and nicely pegged down as they advance. The borders in the mixed-flower garden will require to be kept up to the extreme of neatness, by staking and tying the plants as they require it, hoeing and raking the borders at short intervals, particularly after heavy rains, and clearing away all old flower-stems and decaying leaves. As roses will now be objects of great attraction, they must have corresponding attention paid to them: nothing tends more to prolong the summer bloom than a constant supply of water and liquid manure; dead flowers and insects must be constantly removed by handpicking; and, when the bloom is over, use the syringe thoroughly. Lose no time in getting a good stock of cloves, picotees, and carnations layered. Prick out Brompton and Queen stocks into nursery beds; see that beds of violets do not want for water. Towards the end of the month put in a few hand-lights of choice verbena cuttings on a south border, which will make fine plants to pot in September, and supply any number of cuttings in the spring. The propagation of any choice kinds of bedding plants when the stock is short, may be commenced at once, and followed up as fast as cuttings can be procured. Stake hollyhocks and dahlias in time, also salvias, phloxes, asters, and other autumnal-blooming plants. Pick off the seed-vessels from rhododendrons and azaleas; and if the weather is dry, let them have copious supplies of water. Clip box-edgings, also yew, thorn and laurel hedges; go over the shrubberies, and reduce any overluxuriant growth.—JAMES CARTER AND CO.'S *Vade Mecum.*

Greenhouse.—Hard-wooded plants of most sorts still requiring a shift must be attended to immediately; those which, having been shifted some time back, have made thin growth, should now be exposed to all but the most powerful sun, in order to harden the tissues, and induce a free-flowering habit; most of the large

plants of Chinese and Indian azaleas may have nearly free exposure to the sun, but should be protected from heavy rains. This is a good time, when water requires to be given so often and abundantly, to ascertain the state of the drainage, and, if defective, to remedy it; for no plant with a defective drainage can ever be safely wintered. Look to the state of young specimen plants in cold pits, keep them more shaded than older plants, at the same time let them be sufficiently exposed to harden the growth and prevent drawing—most of the foregoing remarks will apply to heaths, young plants of which growing into specimens should have their final shift for the season—and see that they are well trained down and luxuriant growth stopped; observe that most kinds of hard-wooded plants are now advancing towards a state of rest, and the tendency of all operations connected with them should be to ripen the wood and produce maturity of growth.—JAMES CARTER AND CO.'S *Vade Mecum.*

Hollyhocks.—Water, water, water must be the watchword, should the weather prove dry. Take off side shoots, and if you wish for extra fine blooms for exhibition mulch all round the plant with half-rotted manure. Go over the plants, and see that the spikes are well secured to the stakes, and carefully remove all but one bud, leaving the largest at each joint.

Pansies.—A damp and late season is favourable to the growth of pansies if to nothing else, as plenty of fine blooms can be obtained now out of doors. There is also plenty of growth and young wood for stock. Dry and hot weather, however, may be naturally expected. Should this be the case, all the more care and attention will be necessary. If dry, the plants must have plenty of water; young stock must be lightly shaded. Seed will be ripening fast, and must be often looked over, as it is something like balsam seed, soon scattered about. Seed may be sown as soon as ripe. Seedlings may be bedded out; they will bloom well in the autumn. Continue to make young stock; the more plants you have the better the chance of getting blooms.—JOHN DOBSON.

Pelargoniums.—Many of the early plants will be gone out of bloom, although this has been an unusually favourable season for prolonging the beauty of most plants in bloom. Such as are out of bloom should be removed to a place where they can get plenty of sun and air, but protected from heavy ranis. This prepares them for leading down, and unless the plants are attended to, they lose such a deal of sap when cut down (the term usually applied to it being bleeding), that many of them are lost, and especially large plants; this, however, may be obviated at any time by merely powdering a little unslacked lime, and putting it on the shoots when they are cut off. Another and very

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important thing is that the plants are perfectly dry at the roots when cut down. Many a plant is lost through inattention in this case. After the plants have been cut down they may be placed in some shady close frame, pit, or greenhouse, and allowed to remain without water for a few days; after this a little water may be given with a fine rose watering-pot. This may be gradually increased as the plants make growth. As soon as the eyes are prominent," say a quarter of an inch, air may be abundantly given. Wind and rain, however, must be kept from them when necessary. At the time of cutting down, of course, is the best time to make plenty of stock for another season. The cuttings may be put singly into thumb-pots, or five or six round a four-inch pot. These should be placed in a warm house or frame, with plenty of drainage. Young plants struck in the spring may be kept growing on, and need only have the tops pinched. They may be tied out and kept growing; by these means they will make plants large enough to exhibit next June or July. It may be as well here just to mention a word or two about the seedling pelargonium exhibited at the Crystal Palace and Regent's Park shows, as your reporter has not done so, and as he hoped I should. At the Crystal Palace there was a great scarcity of novelty or quality. Messrs. Rollison showed something like fifty or sixty French sorts, but only about two flowers that were distinct. Prince of Orange, the one which obtained a prize, can only be useful as a decorative and market-flower, as it burns very much. There were also some from Mr. Turner, among which the most conspicuous was Arabella Goddard (fancy). At Regent's Park, among Mr. Foster's batch, were two good flowers—Orlando, a very large flower, in the style of Beck's Aurelia, and in every way a superb variety. The only fault we could find was that, from its large size, it would not bear shaking about, consequent upon taking it to exhibitions. This we have found the case with very large flowers. Perdita is a fine large flower, and distinct. Beck's Gem of the Roses is also a nice flower, large, and will make a useful specimen. It is a very clean flower. Butterfly, a white of our own raising, will make a distinct white for exhibition, and by many is considered superior to Bride for general effect. Turner's Patroness is a nice light kind, but Fair Ellen is superior to it. Mr. Hoyle and Mr. Turner both showed several other seedlings, but upon comparing them with some of the varieties out they were far from up to the mark, and no improvement; but these we hope to see on another occasion, and report more favourably of them. Messrs. Rollison also exhibited their batch of spotted varieties; one named Parepa was the most distinct and novel. Among Fancies, the Champion, from Mr. Turner, is a first-class flower, something like Mrs. Turner in

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colour, of good shape, and from its appearance likely to prove an acquisition as a specimen. The above-named are really all that were worth noticing at the two exhibitions. The Park show of the 20th of this month is, however, likely to produce something superior to any here noticed, as it is hardly fair to judge flowers so early, considering the lateness of the season. I hope, however, to follow up these remarks in the August number, and before the close of the year make a general report of such flowers as I think are really worth buying. I don't think any one who has placed any faith in my judgment the last two or three years will have cause to regret it, as all the flowers have turned out useful, and worth the money charged, and of which I will take a retrospective glance on the occasion alluded to.—JOHN DOBSON.

Pinks.—At the middle of the month will be the best time for propagating. This may be effected either by piping or layering; the former method is the best, but having been described in the January number, there is no need to repeat the instructions.

Polyanthuses.—The surface of the pots may be frequently stirred to induce the admission of air. Keep the plants clear from dead foliage and green-fly, and water as required. Seed may be sown.

Ranunculuses.—As soon as the foliage decays take up the tubers; allow them to dry gradually.

Roses.—Early this month the rose will be in its glory. The grower will now in a great measure receive the reward of his toils and his troubles; indeed, nothing can be more delightful than a walk early in the morning through the rose quarters, to see the dew on each beauty, every fresh variety having some particular charm. Those early varieties going out of bloom must be thinned, for this in a great measure will insure a fine bloom for autumn. Water with manure water. Keep the plants clean by syringing, and look after suckers and briars.

Tulips.—Carefully take up your bulbs the first fine opportunity. After being carefully dried and cleaned they may be stored away in the cabinet.

FLORAL EXHIBITIONS.

ASHTON-UNDER-LYNE.

TULIP SHOW, HELD AT THE BOAR'S HEAD INN, OLD CROSS, JUNE 2, 1860.

Judges.—Mr. Joseph Oldham and Mr. William Matley.

Bizarre, Feathered.—1. Lord Lilford, T. Mellor; 2. Charles X., J. Lee; 3. Sidney, W. Clayton; 4. Apelles, J. Lee; 5. Surpasse Catafalque, W. Clayton; 6. Duke of Devonshire, J. Haigh; 7. Colbert, J. Lee; 8. Wellington, J. Haigh.

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Bizarre, Flamed.—1. Sans Joe (Premier), W. Chadwick; 2. Paul Pry, G. Broadbent; 3. Unknown, W. Wooller; 4. Devonshire, J. Lee; 5. Charles X., W. Chadwick; 6. Pilot, T. Mellor; 7. Polyphemus, ditto; 8. Wellington, W. Clayton.

Byblœmen, Feathered.—1. Violet Amiable, J. Haigh; 2. Lancashire Hero, J. Miller; 3. Bienfait, T. Mellor; 4. Maid of Orleans, J. Wild; 5. Catherine, G. Broadbent; 6. Beauty, ditto; 7. Edgar, J. Hilton; 8. Washington, J. Miller.

Byblœmen, Flamed.—1. Bacchus, T. Mellor; 2. Lord Denman, W. Clayton; 3. Alexander Magnus, W. Matley; 4. Violet Wallers, G. Broadbent; 5. Unknown, J. Buckley; 6. Fair Flora, W. Chadwick; 7. Bienfait, ditto; 8. La Belle Narene, J. Buckley.

Rose, Feathered.—1. Heroine (Premier), J. Buckley; 2. Lady Crewe, J. Lee; 3. Newcastle, T. Mellor; 4. Count, J. Newton; 5. Jupiter, W. Chadwick; 6. Andromeda, J. Buckley; 7. Unique, J. Lee; 8. Lady Grey, J. Haigh.

Rose, Flamed—1. Unique, W. Clayton; 2. Aglaia, T. Mellor; 3. Triomphe Royale, T. Moss; 4. La Vandicken, W. Clayton; 5. Vesta, ditto; 6. Lord Hill, W. Wooller; 7. Cerise Belle Forme, W. Clayton; 8. Amelia, ditto.

Breeder, Bizarre.—1. Willison's King, J. Newton; 2. Earl Radnor, J. Hilton; 3. Sir Joseph Paxton, W. Chadwick; 4. Hector, ditto; 5. Unknown, W. Clayton; 6. Atticus, W. Chadwick.

Breeder, Byblœmen.—1. Adonis, W. Pickering; 2. Sancta Sophia, J. Newton; 3. Unknown, W. Pickering; 4. Glory, ditto; 5. Chancellor, W. Chadwick; 6. Sir H. Pottinger, T. Mellor.

Breeder, Rose.—1. Lord Derby, J. Lee; 2. Amicable, J. Hilton; 3. Queen of Prussia, W. Matley; 4. Seedling, J. Haigh; 5. Juliet, T. Moss; 6. Mrs. Lea, J. Lee.

Self.—1. Best Yellow, W. Pickering; 2. Best White, W. Chadwick.

ASHTON-UNDER-LYNE.

TULIP SHOW, HELD AT MR. THOMAS MOSS'S, THE GRAPES INN, JUNE 4TH, 1860.

Judges.—Messrs. T. Gibson, J. Oldham, and J. Walton. *Secretary:* Mr. J. Wild.

Silver Cup.—Charles X. and Bacchus, G. Broadbent.

Bizarre, Feathered.—1. Charles X., R. Allsop; 2. Lord Lilford, A. Leech; 3. Magnum Bonum, R. Allsop; 4. Apelles, R. Mills; 5. Vivid, S. Stopford; 6. Lord Guilford Darnley, J. Lee; 7. Seedling, No. 1, Z. Peacock; 8. Waterloo, ditto.

Bizarre, Flamed.—1. Abercrombie (Premier), J. Newton; 2. Polyphemus, R. Allsop; 3. Paul Pry, Z. Peacock; 4. Charles X., T. Mellor; 5. Masterpiece, W. Wooller; 6. Duke of Devonshire, W. Chadwick; 7. Lustre, R. Allsop; 8. Albion, S. Shawcross.

Byblœmen, Feathered.—1. Lancashire Hero (Premier), J. Newton; 2. Bienfait, J. Miller; 3. Violet Amiable, J. Haigh; 4. Edgar, W. Wooller; 5. Maid of Orleans, R. Allsop; 6. Beauty, J. Newton; 7. Sir Henry Pottinger, R. Allsop; 8. Venus, J. Wild.

Byblœmen, Flamed.—1. Sable Monarch, R. Allsop; 2. Bacchus, W. Pickering; 3. Bienfait, W. Chadwick; 4. Incomparable, W. Pickering; 5. Violet Wallers, R. Mills; 6. Van Amburgh, A. Leech; 7. La Belle Narene, R. Allsop; 8. Lord Denman, J. Wild.

Rose, Feathered.—1. Duchess of Newcastle, S. Stopford; 2. Lady Crewe, A. Leech; 3. Heroine, J. Newton; 4. Seedling, T. Mellor; 5. Compte, R. Mills; 6. Andromeda, T. Mellor; 7. Jupiter, W. Chadwick; 8. Hero of the Nile, R. Allsop.

Rose, Flamed.—1. Rose Unique, J. Newton; 2. Aglaia, S. Stopford; 3. Madame Catalina, J. Newton; 4. Triomphe Royale, S. Stopford; 5. Rose Guerrier, J. Lee; 6. Rose Vesta, R. Allsop; 7. Lady Catherine Gordon, ditto; 8. La Vandicken, J. Wild.

Breeder, Bizarre.—1. Sir Joseph Paxton, J. Newton; 2. Willison's King, W.

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Wooller; 3. Pilot, S. Shawcross; 4. Elizabeth, S. Stopford; 5. Duke of Kent, R. Allsop; 6. Earl Radnor, J. Haigh.

Breeder, Byblæmen.—1. Adonis, W. Pickering; 2. William Bentley, J. Newton; 3. Midland Beauty, S. Stopford; 4. Seedling, Z. Peacock; 5. Sir Robert Peel, ditto; 6. Purple Perfection, J. Moss.

Breeder, Rose.—1. Queen of Prussia, A. Leech; 2. Juliet, J. Newton; 3. Seedling, Z. Peacock; 4. Lord Derby, W. Chadwick; 5. Rose Celestial, J. Hilton; 6. Lovely, T. Mellor.

Self.—(Yellow) Model, R. Allsop; (white) Perfection, S. Stopford.

BEDFORD, LEIGH.

TULIP SHOW, HELD AT MR. THOMAS RIMMER'S, EAGLE AND HAWK INN, BEDFORD, MAY 26TH, 1860.

Maiden Prize.—Bienfait, Unique, J. Wilkinson.

Premier Prizes.—1. Surpasse Catafalque, Sans Joe, R. Yates; 2. Charles X., Unique, G. Mort; 3. Charles X., La Belle Narene, J. Tyldesley; 4. Charles X., Unique, J. Lomas.

Bizarre, Feathered.—1. Charles X., J. Clegg; 2. Crown Prince, J. Tyldesley; 3. Crompton's Fancy, J. Wilkinson; 4. Duc de Savoy, R. Yates; 5. Lord Lilford, ditto; 6. Firebrand, Ditto; 7. Magnum Bonum, G. Mort; 8. Dutch Catafalque, ditto.

Bizarre, Flamed.—1. Devonshire, J. Tyldesley; 2. Polyphemus, R. Tyldesley; 3. Lustre, R. Yates; 4. Don Cossack, R. Tyldesley; 5. Sans Joe, R. Yates; 6. Albion, J. Tyldesley; 7. Linnæus, G. Mort; 8. George IV., J. Tyldesley.

Byblæmen, Feathered.—1. Queen of North, J. Tyldesley; 2. Bagot, G. Mort; 3. Violet Amiable, J. Lomas; 4. Lancashire Hero, G. Mort; 5. Mango, J. Tyldesley; 6. Napoleon, R. Tyldesley; 7. Bienfait, R. Yates; 8. Violet Winner, J. Tyldesley.

Byblæmen, Flamed.—1. La Belle Narene, R. Yates; 2. Roi de Siam, J. Lomas; 3. Atlas, G. Mort; 4. Bienfait, R. Tyldesley; 5. Incomparable, J. Lomas; 6. Zinrin, ditto; 7. Violet Wallers, ditto; 8. Uncle Tom, R. Tyldesley.

Rose, Feathered.—1. Hurst's Rose, J. Tyldesley; 2. Lady Crewe, G. Mort; 3. Walworth, ditto; 4. Heroine, J. Tyldesley; 5. Comte de Vergennes, ditto; 6. Brunt, ditto; 7. Anglais, J. Lomas; 8. Andromeda, R. Yates.

Rose, Flamed.—1. Unique, J. Tyldesley; 2. Ponceau, R. Tyldesley; 3. Village Maid, J. Clegg; 4. Aglaia, J. Lomas; 5. Triomphe Royale, R. Tyldesley; 6. Bion, R. Yates; 7. Lady Lilford, R. Tyldesley; 8. La Vandicken, G. Mort.

Breeder, Pans.—1. King (Willison), W. Bentley, Village Maid, G. Mort; 2. Unknown, Duchess of Sutherland, Queen of England, J. Lomas; 3. Polyphemus, Belshaw's Glory, Village Maid, R. Yates; 4. Pompey, Belshaw's Glory, Village Maid, R. Tyldesley.

Breeder, Bizarre.—1. Polyphemus, J. Tyldesley; 2. Unknown, J. Ward; 3. Alicus, J. Clegg; 4. Unknown, R. Yates.

Breeder, Byblæmen.—1. Belshaw's Glory, J. Lomas; 2. Unknown, J. Ward; 3. Maid of Orleans, J. Clegg; 4. Unknown, R. Yates.

Breeder, Rose.—1. Lord Derby, J. Wilkinson; 2. Village Maid, G. Mort; 3. Lady Lilford, J. Lomas; 4. Lady Catherine Gordon, R. Tyldesley.

BEDFORD, LEIGH.

TULIP SHOW, HELD AT THE HOUSE OF MR. R. MORT, SKINNER'S ARMS, CHAPEL STREET, 1860.

Premier Pans, one each Feathered and Flamed.—1. Charles X., Unique, W. Belshaw; 2. Hurst's Rose, George IV., R. Hindley; 3. Heroine, Unique, R. Ratcliffe; 4. Andromeda, Siam, A. Blackburn; 5. Charles X., Surpasse Lecantique,

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R. Prescott; 6. Heroine, La Belle Narene, T. Belshaw; 7. Charles X., Lustre, R. Mort.

Bizarre, Feathered.—1. Charles X., R. Hindley; 2. Magnum Bonum, R. Mort; 3. Crown Prince, R. Hindley; 4. Crompton's Fancy, T. Belshaw; 5. Lord Lilford, R. Ratcliffe; 6. Trafalgar, R. Marsh; 7. Surpasse Catafalque, R. Mort; 8. Seedling, J. Morris; 9. Waterloo, R. Hindley.

Bizarre, Flamed.—1. Surpasse Lecantique, R. Marsh; 2. Lustre, ditto; 3. George IV., R. Hindley; 4. Polyphemus, T. Belshaw; 5. Don Cossack, R. Ratcliffe; 6. Lord Lilford, T. Belshaw; 7. Lord Stanley, R. Ratcliffe; 8. Albion, W. Belshaw; 9. Poilet, A. Blackburn.

Byblæmen, Feathered.—1. Lancashire Hero, R. Hindley; 2. Bienfait, R. Mort; 3. Queen of the North, A. Blackburn; 4. Bagot, R. Mort; 5. Violet Amiable, R. Ratcliffe; 6. Washington, W. Belshaw; 7. Mungo, R. Marsh; 8. Beauty, ditto; 9. Seedling, T. Hilton.

Byblæmen, Flamed.—1. La Belle Narene, R. Marsh; 2. Violet Amiable, T. Belshaw; 3. Violet Wallers, ditto; 4. Roi de Siam, ditto; 5. Ezrima, J. Morris; 6. Bienfait, T. Belshaw; 7. Incomparable, A. Blackburn; 8. Adelaide, T. Belshaw; 9. Table Rex, R. Hindley.

Rose, Feathered.—1. Lady Crewe, R. Prescott; 2. Heroine, ditto; 3. Andromeda, W. Belshaw; 4. Village Maid, J. Morris; 5. Lady Catherine Gordon, R. Ratcliffe; 6. Compte, R. Prescott; 7. Hurst's Rose, J. Morris; 8. Walworth, T. Hilton; 9. Dolittle, R. Ratcliffe.

Rose, Flamed.—1. Unique, T. Belshaw; 2. La Vandicken, J. Morris; 3. Vesta, R. Marsh; 4. Aglaia, A. Blackburn; 5. Camillus, T. Belshaw; 6. Village Maid, ditto; 7. Lady Crewe, T. Hilton; 8. Newcastle, R. Prescott; 9. Unknown, R. Marsh.

Breeder, Pans.—1. Polyphemus, Sunderland, Lady Lilford, W. Belshaw; 2. Duke of Kent, Sunderland, Lady Catherine Gordon, R. Ratcliffe; 3. Truth, Purple Perfection, Anastasia, R. Mort.

Breeder, Bizarre.—1. Duke of Kent, J. Morris; 2. Polyphemus, T. Belshaw; 3. Duke of Hamilton, R. Ratcliffe; 4. Truth, W. Belshaw.

Breeder, Byblæmen.—1. Duchess of Sunderland, R. Ratcliffe; 2. Purple Perfection, ditto; 3. Bagot, W. Belshaw; 4. Godit Parfait, J. Morris.

Breeder, Rose.—1. Lady Lilford, W. Belshaw; 2. Queen of England, J. Morris; 3. Village Maiden, R. Mort; 4. Lady Catherine Gordon, J. Morris.

Self.—1. Min d'Or, T. Belshaw; 2. White Perfection, J. Morris.

BLACKBURN.

TULIP SHOW AT MR. WILKINSON'S, GARDENERS' ARMS, JUNE 2ND, 1860.

Judges.—Messrs. Houlker and Baron; *Secretary*, Mr. W. B. Fairbrother.

Best Pan of Six Varieties.—Charles X., Sans Joe, Bienfait, Incomparable, Lady Crewe, Vandicken; Mr. Hadfield.

Best Single Bloom.—Charles X., Mr. Monk.

Second Single Bloom.—Charles X., ditto.

Maiden Prize.—Charles X., Mr. Almond.

Best Stand of Three Breeders.—Charbonnier, Mr. Bentley; Kate Connor, Mr. Monk.

Best Breeder.—Duke of Kent, Mr. Broughton.

Bizarre, Feathered.—1. Charles X., Mr. Monk; 2. Truth, ditto; 3. Catafalque Superieur, Mr. Hadfield; 4. Waterloo, Mr. Waterhouse; 5. Adonis, W. Haworth; 6. Magnum Bonum, ditto; 7. Therwalsden, Mr. Hadfield.

Bizarre, Flamed.—1. Sans Joe, W. Haworth; 2. Truth, Mr. Monk; 3. Charles X.,

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Mr. Wilkinson; 4. Catafalque Superieur, Mr. Monk; 5. Charbonnier, Mr. Fairbrother; 6. Cyclops, W. Haworth; 7. Paganini, Mr. Foulds.

Byblæmen, Feathered.—1. Violet Amiable, Mr. Foulds; 2. Lancashire Hero, R. Haworth; 3. Bienfait, W. Haworth; 4. Baguet, Mr. Monk; 5. Beauty, W. Haworth; 6. Gigantum, R. Haworth; 7. Lewold, Mr. Wilkinson.

Byblæmen, Flamed.—1 Incomparable, W. Haworth; 2. Baguet, Mr. Waterhouse; 3. Bienfait, Mr. Foulds; 4. Unknown, Mr. Pemberton; 5. Lord Rancliffe, Mr. Hadfield; 6. Violet Brun, R. Haworth; 7. Queen Charlotte, ditto.

Rose, Feathered.—1. Unknown, Mr. Pemberton; 2. Heroine, Mr. Monk; 3. Lady Crewe, Mr. Foulds; 4. Count, Mr. Hadfield; 5. Arlette, Mr. Wilkinson; 6. Kate Connor, Mr. Hadfield; 7. Unknown, R. Haworth.

Rose, Flamed.—1. Vandicken, Mr. Pemberton; 2. Vesta, W. Haworth; 3. Triumph, Mr. Fairbrother; 4. Lady Helen Marr, ditto; 5. Alexander du Roi, ditto; 6. Andromeda, Mr. Monk; 7. Aglaia, Mr. Broughton.

Breeder, Bizarre.—1. Charbonnier, W. Haworth; 2. Sulphur, R. Haworth; 3. Lord Darnley, Mr. Monk; 4. Gold Cup, Mr. Pemberton; 5. Atticus, Mr. Hadfield.

Breeder, Byblæmen.—1. William Bentley, W. Haworth; 2. Sancta Sophia, Mr. Waterhouse; 3. Unknown, Mr. Wilkinson; 4. Unknown, ditto; 5. Schoolboy, Mr. Pemberton.

Breeder, Rose.—1. Madame St. Arnaud, Mr. Monk; 2. Unknown, Mr. Wilkinson; 3. Kate Connor, Mr. Hadfield; 4. Unknown, Mr. Wilkinson; 5. Maid of Harwood, R. Haworth.

Self.—1. Model, Mr. Hadfield; 2. Min d'Or, Mr. Pemberton; 3. White Perfection, Mr. Fairbrother; 4. Yellow King, R. Haworth.

BLACKBURN.

[TULIP SHOW AT MR. JAMES FOULDS, WELLINGTON GARDENS, JUNE 9TH, 1860.]

Judges.—Messrs. Houlker and Houseman; *Secretary*, Mr. W. B. Fairbrother.

Premier Prize.—Charles X., Mr. Monk.

Bizarre, Feathered.—1. Charles X., Mr. Monk; 2. Catafalque, ditto; 3. Magnum Bonum, R. Haworth; 4. Sulphur, E. Hodgson; 5. Hector, T. Chippendale; 6. Waterloo, Mr. Broughton; 7. Lord Lilford, W. Haworth.

Bizarre, Flamed.—1. Sans Joe, W. Haworth; 2. Truth, Mr. Monk; 3. Polyphemus, J. Foulds; 4. Paganini, ditto; 5. Catafalque, Mr. Monk; 6. Charles X., Mr. Wilkinson; 7. Old Dutch, R. Haworth.

Byblæmen, Feathered.—1. Bienfait, Mr. Monk; 2. Lewold, J. Foulds; 3. Baguet, Mr. Monk; 4. Midland Beauty, Mr. Crossley; 5. Queen of the North, W. Haworth; 6. Beauty, Mr. Hodgson; 7. General Picton, Mr. Chippendale.

Byblæmen, Flamed.—1. Bienfait, R. Haworth; 2. Incomparable, W. Haworth; 3. Lord Denman, Mr. Chippendale; 4. Baguet, R. Haworth; 5. Unknown, Mr. Pemberton; 6. Maid of Orleans, Mr. Crossley; 7. Magnus, Mr. Fairbrother.

Rose, Feathered.—1. Heroine, Mr. Monk; 2. Lady Crewe, Mr. Foulds; 3. Arlette, Mr. Wilkinson; 4. Martius, Mr. Hodgson; 5. Bion, ditto; 6. Newcastle, ditto; 7. Count, R. Haworth.

Rose, Flamed.—1. Vandicken, Mr. Pemberton; 2. Aglaia, Mr. Hodgson; 3. Vesta, R. Haworth; 4. Triumph, Mr. Fairbrother; 6. Monteau Ducal, ditto; 6. Alexander du Roi, ditto; 7. Celestial, Mr. Chippendale.

Breeder, Bizarre.—1. Polyphemus, Mr. Wilkinson; 2. Sulphur, ditto; 3. Duke of Kent, Mr. Fairbrother; 4. Petrach, Mr. Monk.

Breeder, Byblæmen.—1. Martius, Mr. Wilkinson; 2. Martius, ditto; 3. Cardinal, Mr. Chippendale; 4. Sancta, Mr. Monk.

Breeder, Rose.—1. Madam St. Arnaud, Mr. Monk; 2. Kate, Mr. Pemberton; 3. Juliet, Mr. Hodgson; 4. Martius, Mr. Wilkinson.

Self.—1. Min d'Or, Mr. Broughton; 2. Model, G. Foulds.

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BUTLEY.

TULIP SHOW HELD AT THE HOUSE OF MRS. KITCHEN, MAY 31ST, 1860.

Secretary.—Mr. R. Nunnerley.

Premier Prize (silver cup).—1. Charles X., Edgar, Heroine, Sans Joe, Bacchus, Aglaia; Mr. R. Nunnerley. 2. Charles X., Beauty, Heroine, Sans Joe, Princess Royal, Aglaia; Mr. J. Thorniley.

Breeder, Pans.—Pilot, Queen (Willison), Derby; Mr. Nunnerley.

Maiden Prize.—Bienfait, Mr. Swindles.

Bizarre, Feathered.—1. Charles X., J. Thorniley; 2. Charles X., R. Nunnerley 3. Lord Lilford, R. Nunnerley; 4. Magnum, D. Potts; 5. Surpasse Catafalque, J. Hooley; 6. Old Dutch Catafalque, R. Nunnerley; 7. Sans Joe, R. Nunnerley; 8. Paul Pry, J. Hart; 9. Major Hibbert, R. Nunnerley; 10. Polyphemus, J. Chadwick.

Bizarre, Flamed.—1. Sans Joe, J. Hooley; 2. Sans Joe, ditto; 3. Pilot, D. Potts; 4. Duke of Devonshire, J. Chadwick; 5. Polyphemus, J. Hooley; 6. Colbert, R. Nunnerley; 7. Charles X., J. Hooley; 8. Paul Pry, D. Potts; 9. King Delaforce, J. Thorniley; 10. Herbert, R. Nunnerley.

Byblæmen, Feathered.—1. Bienfait, P. Swindles; 2. Lord Gough, J. Hooley; 3. Bienfait, P. Swindles; 4. Violet Amiable, D. Potts; 5. Edgar, J. Hart; 6. Surpassant, D. Potts; 7. Denman, R. Nunnerley; 8. Lancashire Hero, ditto; 9. Lady F. Hastings, J. Hooley; 10. Beauty, R. Nunnerley.

Byblæmen, Flamed.—1. Denman, D. Potts; 2. Bienfait, ditto; 3. Denman, ditto; 4. Princess Royal, J. Thorniley; 5. Bacchus, J. Hart; 6. Bagot, J. Chadwick; 7. Louis XVI., J. Hart; 8. Voerhelm, R. Nunnerley; 9. Beauty, D. Potts; 10. Wallers, W. Kitchen.

Rose, Feathered.—1. Heroine, D. Potts; 2. Heroine, J. Thorniley; 3. Lady Crewe, R. Nunnerley; 4. Compte, J. Hooley; 5. Aglaia, R. Nunnerley; 6. Harriet, J. Thorniley; 7. Andromeda, ditto; 8. Primar de Austrias, J. Hooley; 9. Bion, J. Thorniley; 10. Lady Raglan, ditto.

Rose, Flamed.—1. Aglaia, J. Hooley; 2. Aglaia, J. Chadwick; 3. Vesta, D. Potts; 4. La Vandicken, ditto; 5. Unique, W. Kitchen; 6. Ponceau Brilliant, D. Potts; 7. Triomphe Royale, J. Thorniley; 8. Emily, ditto; 9. Princess Maud, R. Nunnerley; 10. Jupiter, J. Hart.

Breeder, Bizarre.—1. Pilot, R. Nunnerley; 2. King, J. Hooley; 3. Pastor, D. Potts; 4. Colbert, J. Swindles; 5. Old Dutch Catafalque, D. Potts; 6. Duke of Kent, ditto.

Breeder, Byblæmen.—1. Seedling, J. Hart; 2. Miss Forrest, R. Nunnerley; 3. Orleans, W. Kitchen; 4. Unknown, R. Nunnerley; 5. Warwick, P. Swindles; 6. Godet Parfait, R. Nunnerley.

Breeder, Rose.—1. Derby, R. Nunnerley; 2. Celestial, ditto; 3. Village Maid, D. Potts; 4. Queen of England, ditto; 5. Lilford, J. Chadwick; 6. Seedling, J. Hart.

Self.—(White) Perfection, J. Chadwick; (yellow) Model, D. Potts.

DENTON.

GREAT SOUTH LANCASHIRE TULIP SHOW AT THE NOTTINGHAM CASTLE INN, JUNE 2ND, 1860.

Judges.—Mr. Potts and Mr. Holdham.

Best Pan.—Heroine and Bacchus, H. Travis.

Second Pan.—Charles X. and Polyphemus, J. Sidley.

Premier Prizes.—Extra feathered, Violet Amiable, J. Hart; Extra flamed, Bacchus, W. Whittaker.

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Bizarre, Feathered.—1. Charles X., J. Baxendale; 2. Lord Lilford, W. Whittaker; 3. Duke of Devonshire, H. Travis; 4. Appelles, J. Sidley; 5. Masterpiece, H. Travis; 6. Sir Sidney Smith, J. Sidley; 7. Surpasse Catafalque, W. Shelmerdine; 8. Willison's King, J. Baxendale.

Bizarre, Flamed.—1. Pilot, T. Harrison; 2. Sans Joe, S. Barlow; 3. Charles X., ditto; 4. Polyphemus, J. Baxendale; 5. Vivid, J. Knott; 6. Aurora, W. Shelmerdine; 7. Sir Joseph Paxton, J. Knott; 8. Royal Gem, W. Peacock.

Byblœmen, Feathered.—1. Violet Amiable, J. Hart; 2. Edgar, W. Shelmerdine; 3. Bienfait, S. Barlow; 4. Incomparable, H. Travis; 5. Lancashire Hero, J. Newton; 6. Beauty, J. Newton; 7. Maid of Orleans, S. Barlow; 8. Van Amburgh, T. Leach.

Byblœmen, Flamed.—Bacchus, W. Whittaker; 2. Lord Denman; 3. Incomparable, J. Peacock; 4. Bienfait, J. Knott; 5. Queen Charlotte, S. Barlow; 6. Bridesmaid, W. Whittaker; 7. Violet Wallers; 8. Fair Flora, W. Peacock.

Rose, Feathered.—1. Heroine, H. Travis; 2. Lady Crewe, H. Travis; 3. Mrs. Lea, S. Barlow; 4. Aglaia, J. Knott; 5. Duchess of Newcastle, W. Peacock; 6. Compte de Vergennes, J. Knott; 7. Jupiter, J. Peacock; 8. Andromeda, H. Travis.

Rose, Flamed.—1. Lady Catherine Gordon, T. Harrison: 2. Rose Unique, J. Baxendale; 3. Aglaia, W. Peacock; 4. Triomphe Royale, J. Knott; 5. La Vandicken, S. Barlow; 6. Rose Vesta, W. Peacock; 7. Rose Guerrier, W. Whittaker; 8. Rose Camillus, S. Barlow.

Breeder, Bizarre.—1. Sir J. Paxton, S. Barlow; 2. Mammoth King, J. Hart; 3. Pilot, W. Shelmerdine; 4. John A. Gaunt, W. Peacock; 5. Duke of Kent, S. Barlow; 6. Willison's King, W. Whittaker.

Breeder, Byblœmen.—1. Seedling, W. Whittaker: 2. Sarah, T. Leach; 3. Earl of Warwick, S. Barlow; 4. Seedling, W. Whittaker; 5. Sancta Sophia, W. Peacock; 6. Miss Forrest, S. Barlow.

Breeder, Rose.—1. Juliet, H. Travis; 2. Lord Derby, S. Barlow; 3. Celestial, H. Travis; 4. Queen of England, S. Barlow; 5. Anne Hathaway, S. Barlow; 6. Martin, No. 11, J. Peacock.

Self.—(Yellow) Min d'or, J. Sidley; (white) White Perfection, Mr. Shelmerdine.

DRESDEN, NEAR LONGTON.

TULIP SHOW, HELD AT THE HOUSE OF MR. S. BRIDGWOOD, JUNE 2ND, 1860.

Pans.—1. Magnum Bonum, Aglaia, E. Oxley; 2. Charles X., Aglaia, J. Hughes; 3. Rising Sun, Aglaia, T. Forrester; 4. Charles X., Merit, G. Wilson; 5. Baguet; Aglaia, S. Bridgwood; 6. Andromeda, Walworth, J. Dennis; 7. Charles X., ditto, J. Tams.

Bizarre, Feathered.—1. Magnum Bonum, E. Oxley; 2. Magnum Bonum, G. Wilson; 3. Dentonia, J. Hughes; 4. Rising Sun, J. Tams; 5. Catafalque, G. Wilson. 6. Charles X., ditto; 7. Lord Lilford, ditto; 8. Apelles, J. Hughes.

Bizarre, Flamed.—1. Triomphe Royale, E. Oxley; 2. Aglaia, J. Hughes; 3. Unknown, ditto; 4. Lady C. Gordon, ditto; 5. Triomphe Royale, G. Wilson; 6. Triomphe Royale, J. Tams; 7. Camillus, E. Oxley; 8. Unknown, S. Bridgwood.

Byblœmen, Flamed.—1. Pandora, G. Wilson; 2. Denman, T. Forrester; 3. Princess Royal, J. Hughes; 4. Princess Alice, S. Bridgwood; 5. Unknown, J. Dennis; 6. Violet Quarto, G. Wilson; 7. Van Amburgh, J. Hughes; 8. Lawrence Friend, S. Bridgwood.

Rose, Feathered.—1. Lady Crewe, J. Dennis; 2. Lady Crewe, ditto; 3. Aglaia, ditto; 4. Comte Virginis, J. Hughes; 5. Ne Plus Ultra, E. Oxley; 6. Mrs. Heap, G. Wilson; 7. Andromeda, J. Hughes; 8. Bion, ditto.

Bizarre, Flamed.—1. Sans Joe, G. Wilson; 2. Sans Joe, E. Oxley; 3. Rufus, S. Bridgwood; 4. Merit, G. Wilson; 5. Duke of Devonshire, E. Oxley; 6. Fabius, J. Hughes; 7. Polyphemus, G. Wilson; 8. Charles X., S. Dennis.

Byblœmen, Feathered.—1. Maid of Orleans, John Hughes; 2. Maid of Orleans, S

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Bridgwood; 3. Bienfait, J. Dennis; 4. Comptesse de Flanders, J. Hughes; 5. Lewold, G. Wilson; 6. Unknown, ditto; 7. Unknown, ditto; 8. Grotius, S. Bridgwood.

Breeder, Bizarre.—1. Grooms, G. Wilson; 2. Seedling, E. Oxley.

Breeder, Byblœmen.—1. Jack Whittaker, G. Wilson; 2. Maid of Orleans, E. Oxley.

Breeder, Rose.—1. Lady C. Gordon, J. Tams; 2. Anastasia, G. Wilson.

DUKINFIELD.

TULIP SHOW, HELD AT THE BUSH INN, MAY 26TH, 1860.

Judges.—Mr. A. Leech, Mr. J. Hutton; *Secretary*, Mr. Moses Wilde.

Bizarre, Feathered.—1. Rising Sun, J. Heap; 2. Surpasse Catafalque, J. Woodhead; 3. Charles X., ditto; 4. Waterloo, W. Hilton; 5. Crown Prince, J. Heap; 6. Royal Gem, J. Woodhead.

Bizarre, Flamed.—1. Surpasse Lecantique, J. Knott; 2. Sans Joe, J. Woodhead; 3. Paul Pry, J. Knott; 4. Duke of Devonshire, J. Knott; 5. Liberty, W. Hilton; 6. Lustre, T. Penkithman.

Byblœmen, Feathered.—1. Edgar, J. Woodhead; 2. Bienfait, T. Penkithman; 3. Violet Winner, J. Heap; 4. Mungo, W. Hilton; 5. La Belle Narene, M. Wilde; 6. Beauty, J. Woodhead.

Byblœmen, Flamed.—1. Bienfait, J. Woodhead; 2. H. and B., T. Penkithman; 3. Roi de Siam, M. Wilde; 4. Louis XVI., J. Woodhead; 5. Violet Winner, J. Knott; 6. Vulcan, S. Marsland.

Rose, Feathered.—1. Comte, J. Woodhead; 2. Lady Crewe, J. Battersby; 3. Lady Lilford, ditto; 4. Newcastle, J. Heap; 5. Hero of the Nile, J. Battersby; 6. Duke de Brunt, W. Hilton.

Rose, Flamed.—1. Vesta, J. Woodhead; 2. Ponceau Brilliant, W. Hilton; 3. Unique, S. Marsland; 4. Village Maid, J. Woodhead; 5. Unknown, T. Perkins; 6. Lady Lilford, W. Cottam.

Breeder, Bizarre.—1. Earl Radnor, J. Heap; 2. Pilot, M. Wilde; 3. Patriarch, J. Woodhead.

Breeder, Byblœmen.—1. Lord Vernon, J. Heap; 2. Lancashire Hero, W. Hilton; 3. Godit Parfait, J. Woodhead.

Breeder, Rose.—1. Unknown, M. Wilde; 2. Celestial, J. Woodhead; 3. Newcastle, W. Cottam.

Self.—(Yellow) Model, J. Woodhead; (white) Flag, J. Knott.

ESTMORE, NEAR WAKEFIELD.

TULIP SHOW, HELD AT MR. WOOD'S, THE FOX AND GRAPES INN, MAY 27TH, 1860.

Judges.—Mr. S. Hartley and Mr. Fryer, of Leeds.

Premier, Feathered.—Platoff, T. Parker.

Premier, Flamed.—Napoleon, G. Gill.

Premier, Breeder.—Pilot, G. Gill.

Pans (copper kettle).—1. Great Western, Alexander, Magnus, Sir J. Paxton, Aglaia, Aglaia, Seedling; G. Gill. 2. Platoff, Napoleon, Baguet, Britannia, Aglaia, Aglaia; A. Holmes. 3. Platoff, Polyphemus, Roi de Siam, Seedling, Triomphe Royale, John Haigh; T. Parker.

Breeders.—1. Pilot, Queen of England (Parker), Queen (Willison); 2. King (Willison), Queen (Willison), Seedling; T. Parker. 3. Conqueror of the World, Queen (Willison), Gem (Battersby); W. Mellor.

Bizarre, Feathered.—1. Duke of Devonshire, W. Mellor; 2. Duke of Devonshire, ditto; 3. Platoff, T. Parker; 4. Platoff, S. Hartley; 5. Platoff, A. Holmes; 6. Sir E. Toryns, ditto.

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Bizarre, Flamed.—1. Napoleon, G. Gill; 2. Pilot, ditto; 3. Pilot, A. Holmes; 4. Pilot, W. Mellor; 5. Pilot, ditto; 6. Polyphemus, ditto.

Byblæmen, Feathered.—1. Lady Denman, W. Mellor; 2. Lady Denman, ditto; 3. Britannia, S. Hartley; 4. Baguet, A. Holmes; 5. Baguet, S. Hartley; 6. Baguet, T. Gill.

Byblæmen, Flamed.—1. Princess Royal, J. Gill; 2. Lord Denman, W. Mellor; 3. Britannia, J. Gill; 4. Lord Denman, W. Mellor; 5. Lord Denman, ditto; 6. Incomparable, S. Hartley.

Rose, Feathered.—1. Aglaia, A. Holmes; 2. Seedling, T. Parker; 3. Lady Crewe, T. Gill; 4. Aglaia, A. Holmes; 5. Aglaia, ditto; 6. Triomphe Royale, S. Hartley.

Rose, Flamed.—I. Lady Stanley, J. Gill; 2. Lady Stanley, ditto; 3. Aglaia, ditto; 4. Triomphe Royale, T. Gill; 5. Aglaia, J. Gill; 6. Aglaia, T. Parker.

Breeder, Bizarre.—1. Mammoth King, T. Parker; 2. King (Willison), J. Gill; 3. Sir J. Paxton, W. Mellor; 4. Pilot, J. Gill; 5. General Strangeway, W. Mellor; 6. Sir G. Brown, T. Parker.

Breeder, Byblæmen.—1. Sancta Sophia, W. Mellor; 2. Seedling, S. Hartley; 3. Seedling, C. Gill; 4. Seedling, ditto; 5. Seedling; 6. Benyanran, W. Mellor.

Roses.—1. Queen of England, J. Gill; 2. Gem (Battersby), W. Mellor; 3. Village Maid, ditto; 4. Catherine, G. Gill; 5. Juliet, W. Mellor; 6. Lady Stanley, ditto.

HYDE.

GREAT NORTH CHESHIRE TULIP SHOW.

The thirteenth annual Great North Cheshire Tulip Show, held at the house of Mr. J. Goddard, Sportsman's Inn, Hyde, on Whit-Friday.

Judges.—Messrs. Joseph Oldham, Mottram; David Potts, Bollington; and Robert Taylor, Glodwick.

Maiden Prize (kettle).—Earl Radnor, J. Goddard.

Premier Prize (£5 silver cup).—Heroine and Sans Joe, J. Buckley.

Bizarre, Feathered.—1. Charles X., J. Lees; 2. Lord Lilford, T. Leach; 3. Sidney, T. Leach; 4. Devonshire, J. Sidley; 5. Appelles, J. Newton; 6. Old Dutch Catafalque, T. Leach; 7. Paul Pry, T. Harrison; 8. Masterpiece, J. Peacock; 9. Surpasse Catafalque, W. Shelmerdine; 10. Waterloo, W. Clayton.

Bizarre, Flamed.—1. Paul Pry, J. Hall; 2. Sans Joe, J. Peacock; 3. Linnæus, W. Clayton; 4. Charles X., J. Hall; 5. Devonshire, W. Clayton; 6. Pilot, J. Sidley; 7. Tariff, J. Knott; 8. Willisson's King, J. Peacock; 9. Polyphemus, T. Harrison; 10. Old Dutch Catafalque, T. Leach.

Byblæmen, Feathered.—1. Bienfait, T. Leech; 2. Violet Amiable, J. Haigh; 3. Lancashire Hero, J. Lees; 4. Edgar, T. Moss; 5. Godet Parfait, J. Newton; 6. Beauty, J. Sidley; 7. Angelina, T. Mellor; 8. Lord Vernon, T. Harrison; 9. Washington, J. Knott; 10. Midland Beauty, W. Clayton.

Byblæmen, Flamed.—1. Lord Denman, W. Clayton; 2. Bacchus, J. Sidley; 3. Bienfait, T. Leach; 4. Louis XII., W. Chadwick; 5. Violet Wallers, S. Arden; 6. Czarine, W. Chadwick; 7. Incomparable, T. Mellor; 8. Queen Charlotte, T. Harrison; 9. Queen Adelaide, J. Millar; H. and B. Seedling, W. Clayton.

Rose, Feathered.—1. Heroine, J. Newton; 2. Madame St. Arnaud, T. Mellor; 3. Seedling Rose, Z. Peacock; 4. Comte, J. Newton; 5. Lady Crewe, J. Millar; 6. Newcastle, J. Hall; 7. Jupiter, J. Sidley; 8. Mary Lamb, W. Chadwick; 9. Andromeda, J. Williamson; 10. Lady Moseley, W. Pickering.

Rose, Flamed.—1. La Vandicken, W. Clayton; 2. Aglaia, ditto; 3. Lady C. Gordon, Z. Peacock; 4. Triumph Royal, J. Sidley; 5. Vesta, T. Leech; 6. Unique, G. Hurst; 7. Amelia, J. Knott; 8. Thalestress, T. Leach; 9. Julianna, J. Sidley; 10. Vanquerre, S. Shawcross.

Breeder, Bizarre.—1. Pilot, T. Leach; 2. Groom's Seedling, No. 2, J. Sidley; 3.

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Sir J. Paxton, T. Harrison; 4. Old Dutch Catafalque, T. Leach; 5. Willison's King, J. Newton; 6. Polyphemus, T. Leech; 7. Earl Radnor, J. Haigh; 8. Groom's Seedling, No. 1, J. Peacock.

Breeder, Byblœmen.—1. Miss Forest, W. Clayton; 2. Lord Denman, T. Harrison; 3. Adonis, J. Newton; 4. Sancta Sophia, J. Haigh; 5. Van Amburgh, J. Sidley; 6. Sarah, T. Leach; 7. Oliver Goldsmith, T. Harrison; 8. Sir Robert Gardener, T. Harrison.

Breeder, Rose.—1. Juliet, T. Leach; 2. Queen of England, J. Knott; 3. Lord Derby, W. Clayton; 4. Mrs. Leah, J. Haigh; 5. Mabel, J. Peacock; 6. Celestial, T. Harrison; 7. Queen Henrietta, W. Clayton; 8. Anne M'Gregor, J. Peacock.

Self.—(Best Yellow) Model, W. Chadwick; (Best White) Perfection, J. Knott.

LEEDS.

CENTRAL FLORAL SOCIETY'S TULIP SHOW, HELD JUNE 5TH, 1860, AT MR. THOMAS LONG'S, TEMPLAR INN.

Judges.—Mr. Edward Schofield, Wortley; Mr. John Fryer, Leeds. *Secretary*, Mr. S. Hartley.

Premier Feathered Bloom.—Zenobia (feathered byblœmen), Mr. S. Hartley.

Premier, Flamed.—Sans Joe, Mr. W. Chadwick.

Pans of six Rectified Flowers.—1. Platoff Seedling, Garibaldi (feathered bizarre), Zenobia, Queen Charlotte, Compte de Vergennes, and Cerise Royale; Mr. S. Hartley. 2. Platoff, Caliph, Violet Amiable, Maid of Orleans, Heroine, Aglaia; Mr. J. Boshell.

Bizarre, Feathered.—1. Platoff, Mr. Hartley; 2nd and 3rd ditto, Mr. Boshell; 4. Duke of Devonshire; 5. Sphinx; 6. Platoff, Mr. Hartley.

Bizarre, Flamed.—1. Sans Joe, Mr. Chadwick; 2. Pilot, ditto; 3. Polyphemus; 4 and 5. Pilot, Mr. Boshell; 6. Polyphemus, Mr. Hartley.

Byblœmen, Feathered.—1. Maid of Orleans, Mr. Hartley; 2 and 3. Sarah Ann, Mr. Chadwick; 4. Baguet, Mr. Hartley; 5. Maid of Orleans, Mr. Chadwick; 6. Baguet, Mr. Hartley.

Byblœmen, Flamed.—1. Princess Royal, Mr. Boshell; 2. Violet Alexander, Mr. Hartley; 3. Lord Vernon, Mr. Boshell; 4. Alcon, Mr. Hartley; 5. Baguet, Mr. G. Trotter; 6. Lord Vernon, Mr. Chadwick.

Rose, Feathered.—1. Heroine; 2. Madame St. Arnaud, Mr. Hartley; 3. Heroine, Mr. Chadwick; 4 and 5. Dixon's Bion; 6. Matilda, Mr. Hartley.

Rose, Flamed.—1. Cerise Blanche, Mr. Hartley; 2. Aglaia, Mr. Chadwick; 3. Triomphe Royale; 4. Manteau Ducal, Mr. Hartley; 5. Aglaia, Mr. Chadwick; 6. Matilda, Mr. Hartley.

Breeder, Bizarre.—1 and 2. Pilot, Mr. Boshell; 3. Nimrod (Walker's), Mr. Hartley.

Breeder, Byblœmen.—1. Lord Denman, Mr. Hartley; 2. Maid of Orleans, Mr. Boshell; 3. Earl of Warwick, Mr. Chadwick.

Breeder, Rose.—1. Matchless (Morris's); 2. Martin's, No. 2 (pale rose), Mr. Hartley; 3. Catherine, Mr. Chadwick.

Self.—1. Yellow Beauty, Mr. Hartley; 2. Cotherston; 3. Yellow Beauty, Mr. Boshell.

This was a good Show, most of the flowers being well-grown, and in nice condition. Two or three growers brought their blooms, but had no chance of winning, as their beds had unfortunately been visited by a hailstorm on the Friday previous, while the covers were off. There was a large muster of florists and their friends.

LONGTON.

TULIP SHOW HELD AT THE THREE TUNS INN, MAY 26TH, 1860.

Pans of Six.—1. Charles X., Sans Joe, David, Lord Denman, Heroine, Aglaia;

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T. Cooper. 2. Charles X., Sans Joe, Gibbons' 71, Duke of Orleans, Aglaia, ditto; A. Shaw. 3. Charles X., Triomphe, Lewold, Queen Charlotte, Compte, Catherine; E. Paulson. 4. Dentonia, Lord Nelson, Ambassador, Princess Royal, Andromeda, Aglaia; J. Hughes.

Bizarre, Feathered.—1. Catafalque, T. Cooper; 2. Magnum Bonum, ditto; 3. Sir Sydney Smith, J. Hughes; 4. Charles X., A. Shaw; 5. Sir Joseph Paxton, ditto; 6. Dentonia, ditto.

Bizarre, Flamed.—1. Sans Joe, T. Cooper; 2. Sans Joe, A. Shaw; 3. Duke of Kent, ditto; 4. Nelson, J. Hughes; 5. Charles X., E. Paulson; 6. Vivid, A. Shaw.

Byblœmen, Feathered.—1. Lewold, A. Shaw; 2. Lewold, ditto; 3. Violet Amiable, ditto; 4. Perfection, ditto; 5. Maid of Orleans, ditto; 6. Marquis of Waterford, ditto.

Byblœmen, Flamed.—1. Pandora, A. Shaw; 2. Sancta Sophia, ditto; 3. Princess Royal, T. Cooper; 4. Lewold, A. Shaw; 5. Princess Royal, T. Cooper; 6. Pandora, A. Shaw.

Rose, Feathered.—1. Aglaia, A. Shaw; 2. Andromeda, T. Cooper; 3. Compte, ditto; 4. Heroine, ditto; 5. Aglaia, J. Hughes; 6. Andromeda, E. Paulson.

Rose, Flamed.—1. Aglaia, T. Cooper; 2. Camillus, ditto; 3. Aglaia, ditto; 4. Triomphe Royale, ditto; 5. Lady Catherine Gordon, A. Shaw; 6. Baguet, T. Cooper.

Breeder, Bizarre.—1. Seedling, A. Shaw; 2. Ashmole's 75, ditto; 3. Dentonia, J. Hughes.

Breeder, Byblœmen.—1. Nimrod, A. Shaw; 2. Maid of Orleans, T. Cooper; 3. Seedling, A. Shaw.

Breeder, Rose.—1. Seedling, A. Shaw; 2. Seedling, ditto; 3. Seedling, ditto.

MIRFIELD.

THE WEST RIDING TULIP SOCIETY'S SHOW, HELD AT THE BLACK BULL INN, JUNE 4TH, 1860.

Judges.—Mr. T. Benn, Wortley; Mr. J. Hinscliff, Lightcliff.

Premier Flower.—Zenobia, Mr. Samuel Hartley, Potter Newton, near Leeds.

Bizarre, Feathered.—1. Platoff, S. Hartley; 2. Sovereign, J. Boshell, Beeston; 3. Magnum Bonum, E. Schofield, Wortley; 4. Sphinx, S. Hartley; 5. Sovereign, J. Boshell; 6. Platoff, S. Hartley.

Bizarre, Flamed.—1. Pilot, D. Naylor, Wortley; 2. Solon, Mr. Hartley; 3. Caliph, Mr. Boshell; 4. Polyphemus, Mr. Schofield; 5. Polyphemus, Mr. Boshell; 6. Caliph, Mr. J. Jackson, Leighton, near Huddersfield.

Byblœmen, Feathered.—1. Zenobia, Mr. Hartley; 2. Baguet, Mr. Hartley; 3. Baguet, Mr. Schofield; 4. Violet Amiable, Mr. Boshell; 5. Incomparable, Mr. Jackson; 6. Seedling, Mr. Hartley.

Byblœmen, Flamed.—1. Lord Denman, Mr. Naylor; 2. Lord Denman, Mr. Hartley; 3. Violet Alexander, ditto; 4. Lord Denman, Mr. Jackson; 5. Lord Denman, Mr. Naylor; 6, Alcon, Mr. Schofield.

Rose, Feathered.—1. Fairy Queen, Mr. Jackson; 2. Heroine, Mr. Schofield; 3. Madame St. Arnaud, Mr. Hartley; 4. Dixon's Bion, Mr. Hartley; 5. Comte de Vergennes, Mr. Jackson; 6. Heroine, Mr. Hartley.

Rose, Flamed.—1. Fairy Queen, Mr. Jackson; 2. Aglaia; 3. ditto, ditto; 4. Matilda, Mr. Hartley; 5. Rosa Blanca, Mr. Jackson; 6. Triomphe Royale, Mr. Jackson.

Breeder, Bizarre.—1. Pilot; 2. Ditto; 3. Ditto; 4. Ditto, Mr. Jackson; 5. Pilot, Mr. Schofield; 7. Willison's King, Mr. Boshell.

Breeder, Byblœmen.—1. Lord Denman, Mr. Hartley; 2. Purple Perfection; 3. Sancta Sophia; 4. Ditto, Mr. Jackson; 5. Pearson's No. 3, Mr. Naylor; 6. Sancta Sophia, Mr. Jackson.

Breeder, Rose.—1. Rose Celestial, Mr. Schofield; 2. Lady Catherine Gordon, Mr.

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Jackson; 3. Morris's Matchless, Mr. Hartley; 4. Fairy Queen, Mr. Jackson, 5. Martin's No. 6, Mr. Hartley; 6. Anastasia, Mr. Schofield.

Self.—1. Yellow Beauty, Mr. Hartley; 2. Cotherston, ditto; 3. Cotherston, Mr. Jackson; 4. Cotherston, ditto; 5. Yellow Beauty, Mr. Boshell; 6. Cotherston, Mr. Jackson.

MOTTRAM.

TULIP SHOW HELD AT THE TOLLEMACHE INN, MOTTRAM, 1860.

Extra Feathered Premier.—Waterloo, C. Robinson.

Extra Flamed Premier.—Rose Unique, J. Miller.

Maiden Prizes.—1. Waterloo, C. Robinson; 2. ditto, R. Shaw; 3. ditto, J. Shepley.

Bizarre, Feathered.—1. Charles X., G. Woodhead; 2. Surpasse Catafalque, T. Chadwick; 3. Magnum Bonum, J. Oldham; 4. Waterloo, R. Shaw; 5. Lord Lilford, J. Millar; 6. Crown Prince, J. Oldham; 7. Trafalgar, J. Massey.

Bizarre, Flamed.—1. Paul Pry, G. Woodhead; 2. Unknown, D. Platt; 3. Sans Joe, G. Woodhead; 4. Charles X., ditto; 5. Waterloo, J. Shepley; 6. Unknown, J. Platt; 7. Lustre, J. Millar.

Byblæmen, Feathered.—1. Bienfait, G. Hurst; 2. Violet Amiable, J. Millar; 3. Beauty, ditto; 4. Edgar, ditto; 5. Washington, ditto; 6. Violet Winner, J. Massey; 7. Unknown, J. Rhodes.

Byblæmen, Flamed.—1. Bienfait, R. Shaw; 2. Unknown, W. Wood; 3. Beauty, J. Woodhead; 4. Incomparable, J. Oldham; 5. Atlas, G. Woodhead; 6. Violet Winner, J. Millar; 7. Democrat, G. Woodhead.

Rose, Feathered.—1. Heroine, G. Woodhead; 2. Lady Crewe, G. Woodhead; 3. Compte de Vergennes, G. Hurst; 4. Unique, J. Millar; 5. Hero of the Nile, ditto; 6. Lady Mossley, G. Woodhead; 7. Lady Lilford, A. Garside.

Rose, Flamed.—1. Unique, J. Millar; 2. Vesta, J. Oldham; 3. Aglaia, ditto; 4. Triomphe Royale, J. Millar; 5. Unknown, G. Woodhead; 6. ditto, ditto; 7. ditto, J. Rhodes.

Breeder, Bizarre.—1. Unknown, J. Rhodes; 2. Catafalque, J. Shepley; 3. Unknown, ditto.

Breeder, Byblæmen.—1. Belshaw's Gloomy, J. Millar; 2. Beauty, J. Oldham; 3. Lacerety, J. Millar.

Breeder, Rose.—1. Lady Crewe, J. Oldham; 2. Seedling, ditto; 3. Village Maid, ditto.

Self.—(Yellow) Min d'Or, J. Massey; (white) Perfection, J. Lawrence.

NOTTINGHAM.

TULIP SHOW, IN CONNECTION WITH THE HORTICULTURAL SOCIETY, AT THE EXCHANGE ROOMS, MAY 30TH.

Twelve Dissimilar Blooms.—1. Aglaia, Lady Franklin, Heroine, Mrs. Pickerell, Sovereign, Princess Royal, Triomphe Royale, Polyphemus, Pilot, La Bien Ami, Magnum Bonum, Aglaia; Mr. Pickerill. 2. Sir J. Paxton, Duke of Devonshire, Pilot, Sphinx, Duchess of Sutherland, Sarah Ann, Nepaulese Prince, Lady Denman, Vicar of Radford, Aglaia, Miss Edgeworth, Duke of Sutherland (Gibbon's); Rev. S. Creswell. 3. Royal Sovereign, Midland Beauty, Aglaia, Pilot, Gem, Camillus, Truth, Baguet, Aglaia, Duke of Lancaster, Washington, Triomphe Royale; T. Gibson.

Three Feathered Blooms.—1. Heroine, Midland Beauty, Grand Duke; Mr. Gibson. 2. Royal Sovereign, Aglaia, Washington; Mr. Gibson. 3. Mrs. Pickerill, Royal Sovereign, Vicar of Radford; Mr. Pickerill. 4. Magnum Bonum, Heroine, Victoria Regina; Mr. Pickerill. 5. Prince of Wales, Vicar of Radford,

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Sphinx; Rev. S. Creswell. 6. Lady Denman, Royal Sovereign, Aglaia; Rev. S. Creswell.

Three Flamed Blooms.—1. Sir J. Paxton, Lady Catherine Gordon, Mary Magdalene; Rev. S. Creswell. 2. Polyphemus, Baguet, Georgiana; Mr. Pickerill. 3. Pilot, Miss Edgeworth, Lord Denman; Rev. S. Creswell. 4. Pilot, Triomphe Royale, Princess Royal; Mr. Pickerill. 5. Lady Stanley, Addison, Duke of Devonshire; T. Gibson.

ROYTON.

THE NINTH ANNUAL MEETING OF THE ROYTON TULIP SOCIETY, OPEN TO ALL ENGLAND, WAS HELD AT THE HOUSE OF MR. JONATHAN KAY, SPREAD EAGLE INN, ROYTON, ON SATURDAY, THE 9TH OF JUNE, 1860.

Judges.—Mr. Thomas Leach, Hooley Hill; Mr. Robert Taylor, Glodwich; Mr. John Marsden, Middleton. *Secretary.*—Mr. Henry Travis.

Seventeen *Pans*, of two flowers each, were staged for competition, out of this number six of the best were selected, and the following sums were awarded to the owners thereof:—1. |(£2 and a copper kettle) Heroine, Sans Joe; H. Travis. 2. (10*s*. and a copper kettle) Charles X., Sans Joe; B. Hilton. (The following each a copper kettle) 3. Heroine, Aglaia; J. Ashton. 4. Sidney, Violet Wallers; Z. Peacock. 5. Count, Sans Joe; W. Bentley. 6. Heroine, Mable; J. Peacock.

Bizarre, Feathered.—1. Lord Lilford, J. Peacock; 2. Charles X., W. Peacock; 3. Sidney, Z. Peacock; 4. Catafalque, W. Peacock; 5. Willisson's King, H. Travis; 6. Colbert, T. Stephenson; 7. Rising Sun, B. Hilton; 8. Duke of Devonshire, H. Travis.

Byblœmen, Feathered.—1. Bienfait, W. Bentley; 2. Orleans, W. Peacock; 3 Buckley's Beauty, J. Heap; 4. Baguet, W. Bentley; 5. Violet Amiable, J. Smithies; 6. Maid of Athens, J. Peacock; 7. Catharina, J. Ogden; 8. Chellaston Beauty, J. Smithies.

Rose, Feathered.—1. Count, J. Heap; 2. Heroine, H. Travis; 3. Lady Crewe, ditto; 4. Anne M'Gregor, J. Peacock; 5. Duke of Newcastle, J. Smithies; 6. Village Maid, H. Travis; 7. Bion, W. Bentley; 8. Andromeda, J. Smithies.

Breeder, Bizarre.—1. Sir Joseph Paxton, W. Peacock; 2. Duke of Kent, H. Travis; 3. Willison's King, W. Bentley; 4. Captain Nolan, L. Ashmole.

Breeder, Byblœmen.—1. Champion, W. Peacock; 2. Earl of Warwick, ditto; 3. Duchess of Sutherland, J. Peacock; 4. Friar Tuck, S. Barlow.

Bizarre, Flamed.—1. Charles X., B. Hilton; 2. Polyphemus, W. Peacock; 3. Sans Joe, J. Ogden; 4. Charbonnier, W. Peacock; 5. Janus, J. Peacock; 6. Willisson's King, ditto; 7. Lustre, J. Ashton; 8. Alfiero, W. Bentley.

Byblœmen, Flamed.—1. Bienfait, W. Butterworth; 2. Lord Denman, W. Bentley; 3. Flora, Z. Peacock; 4. Magnus, H. Travis; 5. Roi de Siam, W. Peacock; 6. Buckley's Beauty, T. Stephenson; 7. Gibbons, J. Smithies; 8. Orleans, W. Peacock.

Rose, Flamed.—1. Unique, B. Hilton; 2. Aglaia, J. Smithies; 3. Vanquerre, B. Hilton; 4. Vesta, J. Heap; 5. Lady Suffield, W. Peacock; 6. Ponceau Brilliant, ditto; 7. Triomphe Royale, J. Peacock; 8. Amelia, ditto.

Breeder, Rose.—1. Anne M'Gregor, J. Peacock; 2. Juliet, W. Peacock; 3. Lord Derby, ditto; 4. Mabel, J. Peacock.

Self.—(Best Yellow) Min d'Or, J. Ogden; (Best White) White Flag, B. Hilton.

SANDBACH.

TULIP AND PANSY SHOW, HELD AT MR. JOSH. DICKINSON'S, WHEATSHEAF INN, MAY 29TH, 1860.

Judges.—Mr. J. Walker, Winton, near Manchester, Mr. D. Brown, Newcastle, Staffordshire.

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Premier Prize.—Heroine and Aglaia, W. Downing.

Maiden Prize.—Not awarded.

Stewards' Prize, Feathered.—1. Devonshire, J. Steele; 2. Charles X., P. Johnson; 3. Countess of Flanders, J. Furnivall.

Stewards' Prize, Flamed.—1. Aglaia, G. Careless; 2. Polyphemus, S. Allcock; 3. Aglaia, G. Dickinson.

Bizarre, Feathered.—1. Charles X., J. Steele; 2. Devonshire, W. Downing; 3. Waterloo, J. Hodgkinson; 4. Charles X., ditto; 5. Brown's Magnificent, J. Steele; 6. Devonshire, W. Downing; 7. Devonshire, G. Careless; 8. Surpasse, W. Downing.

Bizarre, Flamed.—1. Charles X., C. Johnson; 2. Polyphemus, G. Blackshaw; 3. Polyphemus, J. Shore; 4. Polyphemus, S. Allcock; 5. Sans Joe, C. Johnson; 6. Pilot, G. Dickinson; 7. Charles X., G. Careless; 8. Albion, J. Shore.

Byblœmen, Feathered.—1. Bienfait, W. Downing; 2. Cupid (Ollier's), G. Careless; 3. Bienfait, P. Johnson; 4. Roland, J. Steele; 5. Orleans, W. Downing; 6. Orleans, J. Hodgkinson; 7. Orleans, ditto; 8. Roland, J. Steele.

Byblœmen, Flamed.—1. Violet le Beck, J. Steele; 2. Prince Albert, G. Blackshaw; 3. Lady Flora Hastings, P. Johnson; 4. Bienfait, C. Downing; 5. Gracious, G. Careless; 6. Bienfait, ditto; 7. Bienfait, J. Furnivall; 8. Lady Flora Hastings, J. Shore.

Rose, Feathered.—1. Heroine, C. Johnson; 2. Lady Crewe, G. Careless; 3. Heroine, P. Johnson; 4. Rosy Gem, G. Careless; 5. Heroine, C. Johnson; 6. Bion, G. Dickinson; 7. Bion, ditto; 8. Mrs. Dixon, ditto.

Rose, Flamed.—1. Aglaia, G. Dickinson; 2. Aglaia, ditto: 3. Aglaia, J. Shore; 4. Aglaia, G. Blackshaw; 5. W. Montpesson, G. Dickinson; 6. Aglaia, C. Johnson; 7. Aglaia, G. Dickinson; 8. Aglaia, C. Downing.

Breeder, Bizarre.—1. Paxton, C. Johnson; 2. Paxton, W. Downing; 3. Paxton, ditto; 4. King (Willison's), W. Downing; 5. Exquisite (Willison), ditto; 6. Dentonia, J. Furnivall.

Breeder, Byblœmen.—1. Orleans, G. Dickinson; 2. Orleans, J. Shore; 3. Orleans, G. Dickinson; 4. Orleans, J. Hodgkinson; 5. Orleans, J. Furnivall; 6. J. Whittaker, G. Careless.

Breeder, Rose.—1. Juliet (Willison's), C. Johnson; 2. Juliet (Willison's), G. Careless; 3. Lady Catherine Gordon, C. Johnson; 4. Juliet (Willison's), W. Downing; 5. Rose Celestial, G. Dickinson; 6. Triomphe Royale, J. Steele.

Self.—(Yellow) 1. Model, W. Downing; 2. Model, G. Dickinson. (White) 1. Perfection, J. Steele; 2. Perfection, W. Downing.

SANDBACH.

TULIP SHOW, HELD AT THE HOUSE OF MR. J. ROBINSON, QUEEN'S ARMS, MARKET PLACE.

Judges.—Mr. Samuel Allcock and Mr. James Cooke, both of Sandbach.

Old Growers' Premier Prize.—Royal Sovereign, G. Cade.

Maiden Growers' Premier Prize.—Royal Sovereign, T. Robinson.

Stewards' Prize.—Waterloo, J. Cooke.

Bizarre, Feathered.—1. Royal Sovereign, G. Cade; 2. Royal Sovereign, ditto; 3. Royal Sovereign, T. Bayley; 4. Royal Sovereign, J. Cooke; 5. Truth, ditto; 6. Surpasse Catafalque, G. Cade.

Bizarre, Flamed.—1. Sans Joe, T. Bayley; 2. Sans Joe, J. Cooke; 3. Platoff, G. Cade; 4. Platoff, ditto; 5. Polyphemus, J. Robinson; 6. Duke of Devonshire, G. Cade.

Byblœmen, Feathered.—1. Bienfait, G. Cade; 2. Maid of Orleans, T. Bayley; 3. Maid of Orleans, G. Cade; 4. Maid of Orleans, T. Bayley; 5. La Belle Narene, J. Robinson; 6. Bijou des Amateurs, J. Cooke.

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Byblœmen, Flamed.—1. Lucy Neal, T. Bayley; 2. Lucy Neal, ditto; 3. Lady Flora, ditto; 4. Purple Perfection, ditto; 5. Maid of Orleans, ditto; 6. Duc de Bordeaux, ditto.

Rose, Feathered.—1. Heroine, T. Bayley; 2. Lady Crewe, G. Cade; 3. Heroine, G. Cade; 4. Lady Crewe, J. Robinson; 5. Lady Crewe, G. Cade; 6. Heroine, T. Bayley.

Rose, Flamed.—1. Aglaia, G. Cade; 2. Aglaia, T. Bayley; 3. Aglaia, G. Cade; 4. Triomphe Royale, J. Cooke; 5. Aglaia, T. Bayley; 6. Kate Connor, T. Bayley.

Breeder, Bizarre.—1. Radnor, T. Bayley; 2. Radnor, ditto; 3. Omer Pacha, J. Cooke.

Breeder, Byblœmen.—1. Madame Roland, G. Cade; 2. Buckley's Sportsman, J. Cooke; 3. Lady Flora Hastings, J. Cooke.

Breeder, Rose.—1. Queen Phillippa, T. Bayley; 2. Lady Catherine Gordon, ditto; 3. Triomphe Royale, ditto.

Self.—(White) 1. Perfection, T. Bayley; 2. Perfection, G. Cade; (Yellow) 1. Min d'Or, T. Bayley; 2. Min d'Or, G. Cade.

SHEFFIELD.

TULIP SHOW, HELD AT MR. D. SELLARS, FALCON INN, FLAT STREET.

Premier Prizes: Best Flamed Flower.—Lord Denman, S. Stead.

Best Feathered Flower.—Charles X., J. Powell.

Six Rectified Flowers.—1. Charles X., Polyphemus, Bienfait, Fanny, Heroine, Aglaia; C. Sadiler. 2. Charles X., Sir J. Paxton, Unknown (first-rate), Heroine, Triomphe Royale; A. Knut.

Three Feathered Flowers.—1. Charles X., Violet Amiable, Andromeda; C. Sadiler. 2. Charles X., Seedling, Zuill's Flora; A. Knut. 3. Charles X., Maid of Orleans, Seedling; W. Green. 4. Charles X., Unknown, Aglaia; S. Stead.

Three Flamed Flowers.—1. Pilot, Lord Denman, Aglaia; S. Stead. 2. Charles X., Unknown, Aglaia; F. Nicolson. 3. Unknown, Triomphe Royale, Queen Charlotte; A. Knut. 4. Duke of Devonshire, Chellaston, Mountain Sylph; B. Simmonite.

Six Breeders.—1. Polyphemus, Seedling 34, Unknown, Unknown, Lady C. Gordon, Seedling; A. Knut. 2. Pilot, Masterpiece, Purity, Chellaston, Lady C. Gordon, Chellaston; B. Simmonite.

Three Breeders.—1. Duke of Kent, Chellaston, Lady C. Gordon; A. Knut. 2. Pilot, Chellaston, Chellaston; H. Howard. 3. Seedling, Seedling, Rosabella; S. Stead.

Bizarre, Feathered.—1. Charles X., J. Powell; 2. Lord Lilford, C. Sadiler; 3. Magnum Bonum, B. Simmonite; 4. Vivid, F. Nicolson.

Bizarre, Flamed.—1. El Dorado, S. Stead; 2. Pilot, F. Nicolson; 3. Polyphemus, W. Green; 4. Captain White, B. Simmonite.

Byblœmen, Feathered.—1. Lady Denman, W. Green; 2. La Belle Narene, F. Nicolson; 3. Chellaston, A. Knut; 4. Unknown, S. Stead.

Byblœmen, Flamed.—1. Lord Denman, F. Nicolson; 2. Maid of Orleans, H. Howard; 3. Queen Charlotte, B. Simmonite; 4. Queen of the North, ditto.

Rose, Feathered.—1. Unknown, W. Green; 2. Andromeda, C. Sadiler; 3. Heroine, ditto; 4. Lady Crewe, A. Knut.

Rose, Flamed.—1. Triomphe Royale, F. Nicolson; 2. Aglaia, W. Green; 3. Lady Jane Grey, B. Simmonite; 4. Mountain Sylph, ditto.

Breeder Bizarre.—1. Pilot, F. Nicolson; 2. Duke of Kent, A. Knut; 3. Charles Albert, ditto.

Breeder, Byblœmen.—1. Jack Whittaker, A. Knut; 2. Maid of Orleans, H. Howard; 3. Canova, S. Stead.

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Rose, Breeder.—1. Madame St. Arnaud, A. Knut; 2. Chellaston, H. Howard; 3. Celestial, A. Knut.

STALEYBRIDGE.

TULIP SHOW HELD AT THE FORESTERS' REFUGE INN, JUNE 2ND, 1860.

Judges.—Mr. A. Leech and Mr. J. Hunton; *Secretary*, Mr. M. Wilde.

Bizarre, Feathered.—1. Charles X., W. Cottam; 2. Lord Lilford, W. Hilton; 3. Rising Sun, J. Knott; 4. Waterloo, W. Hilton; 5. Sidney, M. Wilde; 6. Crown Prince, J. Knott.

Bizarre, Flamed.—1. Sans Joe, J. Woodhead; 2. Surpasse Lecantique, J. Knott; 3. Lustre, ditto; 4. Lord Sefton, W. Cottam; 5. Duke of Devonshire, G. Chadwick; 6. Polyphemus, T. Pirkins.

Byblæmen, Feathered.—1. Violet Amiable, M. Wilde; 2. Bienfait, W. Cottam; 3. Lancashire Hero, ditto; 4. Maid of Athens, T. Penkithman; 5. Sable Monarch, M. Wilde; 6. Violet Winner, T. Pirkins.

Byblæmen, Flamed.—1. Sir Henry Pottinger, J. Woodhead; 2. Bienfait, J. Knott; 3. Van Amburgh, T. Penkithman; 4. H. and B., J. Benketham; 5. La Belle Narene, M. Wilde; 6. Democrat, J. Woodhead.

Rose, Feathered.—1. Lady Crewe, J. Woodhead; 2. Compte, ditto; 3. Heroine, ditto; 4. Andromeda, M. Wilde; 5. Dolittle, J. Knott; 6. Aglaia, G. Chadwick.

Rose, Flamed.—1. Unique, M. Wilde; 2. Vesta, J. Woodhead; 3. Matilda, G. Chadwick; 4. Aglaia, H. Holt; 5. Lady Grey, J. Woodhead; 6. Newcastle, T. Penkithman.

Breeder, Bizarre.—1. Willisson's King, J. Woodhead; 2. Earl Radnor, W. Cottam; 3, Caleb, ditto.

Breeder, Byblæmen.—1. Godet Perfait, G. Chadwick; 2. Lancashire Hero, W. Cottam; 3. Maid of Orleans, J. Battersby.

Breeder, Rose.—1. Lady Lilford, T. Penkithman; 2. Juliet, J. Woodhead; 3. Lord Derby, ditto.

Self.—(White) Flag, J. Knott; (yellow) Min d'Or, M. Wilde.

STALEYBRIDGE.

TULIP SHOW HELD AT THE HOUSE OF MR. JAMES BREDBURY, THE SPORTSMAN'S INN, JUNE 9TH, 1860.

Extra Premium.—A pair of two rectified Tulips, one Feathered and one Flamed, Magnum Bonum and Rose Unique, was awarded to Thomas Chadwick, Mottram.

Bizarre, Feathered.—1. Charles X., W. Cottam; 2. Lord Lilford, J. Woodhead; 3. Unknown, T. Chadwick; 4. Surpasse Catafalque, ditto.

Bizarre, Flamed.—1. Polly, W. Cottam; 2. Unknown, T. Chadwick; 3. Sans Joe, G. Woodhead; 4. Unknown, T. Chadwick.

Byblæmen, Feathered.—1. Bienfait, T. Chadwick; 2. Maid of Athens, ditto; 3. Unknown, ditto; 4. Maid of Orleans, J. Lawton.

Byblæmen, Flamed.—1. H. and B., T. Chadwick; 2. Unknown, ditto; 3. Unknown, ditto; 4. Unknown, G. Woodhead.

Rose, Feathered.—1. Lady Crewe, T. Chadwick; 2. Heroine, J. Miller; 3. Lady Grey, G. Woodhead; 4. Unknown, ditto.

Rose, Flamed.—Aglaia, W. Cottam; 2. Lord Hill, ditto; 3. Unknown, J. Miller; 4. Unknown, J. Chadwick.

Bizarre, Breeder.—1. Duke of Hamilton, G. Woodhead; 2. Unknown, H. Hoult.

Breeder, Byblæmen.—1. Unknown, T. Chadwick; 2. Unknown, ditto.

Breeder, Rose.—1. Unknown, T. Chadwick; 2. Unknown, ditto.

Self.—(Yellow) W. Bolton; (white) G. Woodhead.

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STOCKPORT.

TULIP SHOW, HELD AT THE HOUSE OF MR. THOMAS ROLLEY, WATERLOO INN, MAY 26TH, 1860.

First Maiden Prize.—Charles X., J. Hulme.

Second Maiden Prize.—Heroine, R. Hopwood.

Premier, Feathered (set of China).—Violet Amiable, H. Housley.

Premier, Flamed (set of China).—Sans Joe, J. Clarke.

Premier, Breeder (set of knives and forks).—Sir Joseph Paxton, H. Housley.

Bizarre, Feathered.—1. Charles X., J. Hulme; 2. Apelles, J. Bakewell; 3. Charles X., W. Lambert; 4. Magnum Bonum, T. Williamson; 5. Lord Lilford, H. Housley; 6. Catafalque, H. Housley; 7. Paul Pry, W. Lambert; 8. Rising Sun, J. Hulme; 9. General Blucher, T. Bullock.

Bizarre, Flamed.—1. Sans Joe, W. Lambert; 2. Sans Joe, H. Housley; 3. Duke of Kent, J. Wilde; 4. Polyphemus, ditto; 5. Devonshire, T. Bullock; 6. Unknown, H. Housley; 7. Charles X., L. Hussey; 8. Paul Pry, T. Bullock; 9. Albion, H. Housley.

Byblæmen, Feathered.—1. Bienfait, J. Bakewell; 2. Edgar, ditto; 3. Bienfait, W. Hill; 4. Bagot, J. Foulds; 5. Beauty, T. Bullock; 6. Sir Rowland, W. Lambert; 7. Gem, J. Bakewell; 8. Maid of Orleans, W. Lambert; 9. Mango, L. Hussey.

Byblæmen, Flamed.—1. Bacchus, H. Housley; 2. La Belle Narene, W. Hill; 3. Grand Sid, J. Hulme; 4. Lord Denman, J. Foulds; 5. Louis, J. Warren; 6. Van Amburgh, H. Housley; 7. Bienfait, J. Colbert; 8. Queen Adelaide, J. Foulds; 9. Lord Vernon, L. Hussey.

Rose, Feathered.—1. Lady Crewe, J. Bakewell; 2. Lady Crewe, H. Housley; 3. Heroine, J. Wilde; 4. Compte, W. Lambert; 5. Queen Anne, T. Bullock; 6. Aglaia, R. Hopwood; 7. Catherine, W. Lambert; 8. Unknown, T. Bullock; 9. Walworth, T. Bullock.

Rose, Flamed.—1. La Vandicken, J. Clarke; 2. Aglaia, J. Foulds; 3. Triomphe Royale, ditto; 4. Unique, W. Lambert; 5. Princess Maud, J. Bakewell; 6. Vesta, H. Housley; 7. Lady Gordon, W. Lambert; 8. Andromeda, R. Hopwood; 9. Walworth, T. Bullock.

Breeder, Bizarre.—1. Polyphemus, T. Bullock; 2. Duke of Kent, W. Lambert; 3. Sharboneret, H. Housley; 4. Seedling, J. Clarke; 5. Captain Nolan, W. Lambert; 6. Seedling, ditto.

Breeder, Byblæmen.—1. Sancta Sophia, H. Housley; 2. Miss Forrest, ditto; 3. Orleans, J. Hulme; 4. Seedling, T. Bullock; 5. Lord Vernon, J. Bakewell; 6. Beauty, J. Wilde.

Breeder, Rose.—1. Lord Derby, H. Housley; 2. Lady Lilford, L. Hussey; 3. Unknown, H. Housley; 4. Celestial, ditto; 5. Newcastle, J. Warren; 6. Village Maid, J. Foulds.

Self.—1. Seedling, W. Lambert; 2. White Flag, H. Housley.

STOCKPORT.

ORIGINAL TULIP SHOW, HELD AT MR. JAMES ASTLEY'S, GRAPES INN, MAY 31ST, 1860.

Judges.—Mr. Thomas Leech, Hooley Hill; Mr. James Wild, Ashton; Mr. James Falkner, Kelsall Moor.

Maiden Prize.—Charles X., J. Colbert.

Premier, Feathered.—Charles X., J. Bowden.

Premier, Flamed.—Sans Joe, D. Woolley.

Bizarre, Feathered.—1. Charles X., D. Woolley; 2. Captain Nolan, H. Housley; 3. Magnum, D. Woolley; 4. Lord Lilford, L. Hussey; 5. Charles X., J. Colbert;

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6. Devonshire, J. Bowden; 7. Catafalque, B. Shottin; 8. Apellas, J. Turner; 9. Vivid, G. Greaves.

Bizarre, Flamed.—1. Sans Joe, D. Woolley; 2. Sans Joe, J. Turner; 3. Duke of Lancaster, B. Shottin; 4. Polyphemus, D. Woolley; 5. Paul Pry, L. Hussey; 6. Unknown, H. Housley; 7. Pilot, D. Woolley; 8. Lustre, G. Greaves; 9. Charlatan, D. Woolley.

Byblæmen, Feathered.—1. Bienfait, I. Moores; 2. Bienfait, D. Woolley; 3. Edgar, H. Houseley; 4. Orleans, L. Hussey; 5. Violet Quarto, G. Greaves; 6. Violet Winner, B. Shottin; 7. Bagot, L. Hussey; 8. Mango, J. Bowden; 9. Duc de Bourdeaux, G. Greaves.

Byblæmen, Flamed.—1. Bienfait, B. Shottin; 2. Alex. Magnus, D. Woolley; 3. Lord Denman, J. Foulds; 4. Bienfait, D. Woolley; 5. Orleans, ditto; 6. Adelaide, J. Turner; 7. Van Amburgh, H. Housley; 8. Incomparable, J. Colbert; 9. La Belle Narene, J. Turner.

Rose, Feathered.—1. Lady Crewe, B. Shottin; 2. Lady Crewe, ditto; 3. Unknown, ditto; 4. Aglaia, J. Turner; 5. Heroine, H. Houseley; 6. Compte, J. Turner; 7. Queen Anne, J. Robinson; 8. Bacchus, D. Woolley; 9. Walworth, T. Oakes.

Rose, Flamed.—1. Unique, J. Turner; 2. Unique, ditto; 3. Triomphe Royale, J. Foulds; 4. Camillus, D. Woolley; 5. Lady Crewe, J. Colbert; 6. Aglaia, B. Shottin; 7. Rose Guerrier, D. Woolley; 8. La Vandicken, J. Robinson; 9. Unknown, L. Hussey.

Breeder, Bizarre.—1. Pilot, D. Woolley; 2. King, ditto; 3. Captain Nolan, J. Turner; 4. Mammoth King, D. Woolley; 5. Paxton, ditto; 6. Unknown, D. Woolley; 7. Lord Darnley, ditto; 8. Polyphemus, ditto.

Breeder, Byblæmen.—1. Orleans, D. Woolley; 2. Delicate, ditto; 3. Chellaston, ditto; 4. Sancta Sophia, ditto; 5. Duchess of Sutherland, ditto; 6. Unknown, T. Green; 7. Godet Parfait, D. Woolley; 8. Maid of Athens, ditto.

Breeder, Rose.—1. Lord Derby, D. Woolley; 2. Rosy Gem, G. Greaves; 3. Juliet, D. Woolley; 4. Lady Lilford, J. Turner; 5. Village Maid, G. Greaves; 6. Rose Celestial, H. Houseley; 7. Queen of England, G. Greaves; 8. Anastasia, D. Woolley.

Self.—(Best yellow) Seedling, B. Shottin; (best white) Perfection, H. Housley.

STOCKPORT.

ORIGINAL TULIP SHOW, HELD AT MR. WILLIAM HALE'S, GRAY HORSE, LANCASHIRE] HILL, JUNE 2ND, 1860.

Premier, Flamed (set of silver spoons).—Charles X., J. Hulme.

Premier, Feathered (set of silver spoons).—Charles X., W. Smith.

Maiden Prizes (kettle).—1. Charles X., J. Hulme; 2. Lady Crewe, W. Fildes.

Bizarre, Feathered (kettle).—1. Charles X., W. Smith; 2. Lord Lilford, J. Barratt; 3. Charles X., J. Turner; 4. Magnum, J. Turner; 5. Devonshire, S. Brown; 6. Vivid, W. Smith; 7. Catafalque, T. Simpson; 8. Rising Sun, J. Hulme; 9. Sorry Eumbus, W. Smith.

Bizarre, Flamed (kettle).—1. Sans Joe, S. Brown; 2. Charles X., J. Turner; 3. Sans Joe, S. Brown; 4. Polyphemus, ditto; 5. Duke of Devonshire, W. Smith; 6. Pilot, ditto; 7. Lustre, S. Brown; 8. Charbonnier, ditto; 9. Waterloo, ditto.

Byblæmen, Feathered (kettle).—1. Edgar, W. Smith; 2. Bienfait, T. Barratt; 3. Edgar, J. Hulme; 4. Incomparable Surpasse, W. Smith; 5. Violet Amiable, ditto; 6. Unknown, ditto; 7. Sir H. Pottinger, ditto; 8. Beau by G. Greaves; 9. Baguet, J. Clarke.

Byblæmen, Flamed (kettle).—1. Bacchus, W. Smith; 2. Lord Denman, G. Greaves; 3. Baguet, S. Brown; 4. Duke de Bourdeaux, ditto; 5. Bienfait, W. Smith; 6. Adelaide, ditto; 7. Magnus, S. Brown; 8. Violet Wallers, W. Smith; 9. Unknown, ditto.

Rose, Feathered (kettle).—1. Heroine, J. Clarke; 2. Heroine, T. Barrett; 3. Lady

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Crewe, W. Smith; 4. Compte, ditto; 5. Newcastle, ditto; 6. Beauty of Walworth, ditto; 7. Arlette, ditto; 8. Village Maid, ditto; 9. Andromeda, G. Greaves.

Rose, Flamed (kettle).—1. Unique, W. Smith; 2. Fairy Queen, S. Brown; 3. Unique, T. Barratt; 4. Triomphe Royale, W. Smith; 5. Montaducal, ditto; 6. Aglaia, S. Brown; 7. Clark's Lavinia, W. Smith; 8. Camillus, ditto; 9. Rose Monsieur, ditto.

Breeder, Bizarre.—1. Captain Nolan, W. Smith; 2. Duke of Hamilton, ditto; 3. Sir Joseph Paxton, G. Greaves; 4. Atticus, ditto; 5. Pilot, ditto; 6. Duke of Kent.

Breeder, Byblæmen.—1. Bridesmaid, W. Smith; 2. Saint Sophia, ditto; 3. Maid of Orleans, T. Barratt; 4. Delicata, J. Barratt; 5. Godet Parfait, W. Smith; 6. Seedling, J. Clarke.

Breeder, Rose.—1. Lord Derby, S. Brown; 2. Arlette, W. Smith; 3. Juliet, J. Barratt; 4. Lady Lilford, J. Turner; 5. Village Maid, ditto; 6. Rosy Gem, W. Smith.

Self.—1. Yellow Model, W. Smith; 2. White Perfection, J. Clarke.

WAKEFIELD.

TULIP SHOW, HELD AT THE SPORTSMAN INN, JUNE 4TH, 1860.

Judges.—Mr. J. Fryer and Mr. Jackson, Leeds.

Best Six Blooms (silver cup).— 1. Platoff, Polyphemus, Queen (Willison), Roi de Siam, Lady Denman, Triomphe Royale; T. Parker. 2. (coffee-pot), Napoleon, Charles X., Winfred, Princess Royal, Lady Stanley, Anastasia; J. Gill. 3. (copper kettle), Platoff, Leopold, Maid of Orleans, Lady Denman, Lord Denman, Triomphe Royale; W. Mellor. 4. (tea-pot), Sir J. Paxton, Victoria, Aglaia, Aglaia, Maid of Orleans, Princess Royal; G. Gill.

Three Breeders.—1. King (Willison), Queen (Willison), Unknown, T. Parker; 2. Pilot, Britannia, Queen of England (Parker), J. Gill; 3. Maid of Orleans, Lady Stanley, Sir G. Brown (Parker), W. Mellor; 4. Lord Darnley, Lord Raglan, Madame Ristori, Mr. Holmes; 5. Pilot, Catherine, Queen (Willison), G. Gill.

Bizarre, Feathered.—1. Platoff, T. Parker; 2. Lord Lilford, J. Steele; 3. Napoleon, Mr. Holmes; 4. Lord Lilford, J. Steele; 5. Lord Lilford, J. Gill; 6. Napoleon, ditto.

Bizarre, Flamed.—1. Polyphemus, T. Gill; 2. Perfection, G. Gill; 3. Polyphemus, J. Gill; 4. Merit, T. Parker; 5. John Hampden, J. Gill; 6. Charles X., ditto.

Byblæmen, Feathered.—1. Baguet, A. Holmes; 2. Washington, ditto; 3. Baguet, T. Parker; 4. Elegance, J. Steele; 5. Seedling, C. Gill; 6. Elegance, J. Steele.

Byblæmen, Flamed.—1. Princess Royal, J. Gill; 2. Lord Denman, W. Mellor; 3. Princess Royal, G. Gill; 4. Princess Royal, J. Gill; 5. Midland Beauty, A. Holmes; 6. Alexander Magnus, G. Gill.

Rose, Feathered.—1. Lady Crewe, T. Parker; 2. Lady Crewe, J. Steele; 3. Seedling, T. Parker; 4. Lady Crewe, J. Steele; 5. Lady Crewe, J. Steele; 6. Lady Crewe, A. Holmes.

Rose, Flamed.—1. Triomphe Royale, J. Gill; 2. Triomphe Royale, ditto; 3. Aglaia, T. Parker; 4. Triomphe Royale, J. Steele; 5. Triomphe Royale, T. Parker; 6. Triomphe Royale, T. Gill.

Breeder, Bizarre.—1. King (Willisson), J. Gill; 2. King (Willisson), J. Steele; 3. Seedling, J. Steele.

Breeder, Byblæmen.—1. Sarah Ann, W. Mellor; 2. Sarah Ann, ditto; 3. Sarah Ann, ditto.

Breeder, Rose.—1. Lady Stanley, W. Mellor; 2. Lady Stanley, ditto; 3. Lady Stanley, ditto.

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WAKEFIELD.

The Wakefield Floral Society held their Annual Exhibition of Tulips on Monday, June 4th, at the house of Mr. J. Holmes, the Sportsman Inn. Messrs. J. Fryer and R. Jackson, of Leeds, acted as Judges. *Secretary*, Mr. A. Holmes.

***First Pan of Six Flowers*—(a silver cup), to Mr. T. Parker, for Platoff, Polyphemus, Queen (Willison's), Roi de Siam, Lady Denman, and Triomphe Royale.—*Second Pan:* (splendid coffee pot), to Mr. J. Gill, for Napoleon, Royal Sovereign, Winifred, Princess Royal, Anastasia, and Lady Stanley.—*Third Pan:* (tea-kettle) to Mr. Mellor for Platoff, Prince Leopold, Maid of Orleans, Lord Denman, Lady Denman, and Triomphe Royale.—*Fourth Pan:* (a tea-pot) to Mr. G. Gill for Sir J. Paxton, Victory, Maid of Orleans, Princess Royal, Aglaia, and Aglaia.**

***First Pan of Three Breeders.*—Mr. T. Parker, for Willisson's King and Queen and Lady Lilford.—*Second Pan:* Mr. J. Gill, for Pilot, Britannia, and Queen of England.—*Third Pan:* Mr. Mellor, for Sir G. Brown, Maid of Orleans, and Lady Stanley.—*Fourth Pan:* Mr. A. Holmes, for Lord Dearnley, Lord Raglan, and Madame Ristori.—*Fifth Pan:* Mr. G. Gill, for Pilot, Queen, and Miss Catherine.**

***Bizarre, Feathered.*—1. Platoff, T. Parker; 2. Lord Lilford, J. Steele; 3. Napoleon, A. Holmes; 4. Lord Lilford, J. Steele; 5. Ditto, J. Gill; 6. Napoleon, ditto.**

***Byblœmen, Feathered.*—1. Baguet, A. Holmes; 2. Washington, ditto; 3. Baguet, T. Parker; 4. Elegans, J. Steele; 5. Seedling, C. Gill; 6. Elegans, J. Steele.**

***Rose, Feathered.* –1. Lady Crewe, T. Parker; 2. Ditto, J. Steele; 3. Seedling, T. Parker; 4. Lady Crewe, J. Steele; 5. Ditto, ditto; 6. Ditto, A. Holmes.**

***Bizarre, Flamed.*—1. Polyphemus, T. Gill; 2. Seedling, G. Gill; 3. Polyphemus, J. Gill; 4. Merit, T. Parker; 5. John Hampden, J. Gill; 6. Charles X., ditto.**

***Byblœmen, Flamed.*—1. Princess Royal, J. Gill; 2. Lord Denman, Mr. Mellor; 3. Princess Royal, J. Gill; 4. Ditto, ditto; 5. Midland Beauty, A. Holmes; 6. Alexander Magnus, G. Gill.**

***Rose, Flamed.*—1. Triomphe Royale, J. Gill; 2. Ditto, ditto; 3. Aglaia, T. Parker; 4. Triomphe Royale, J. Steel; 5. Ditto, T. Parker; 6. Ditto, T. Gill.**

***Breeder, Bizarre.*—1. Willisson's King, J. Gill; 2. Ditto, J. Steele; 3. Seedling, ditto.**

***Breeder, Byblœmen.*—1, 2, and 3. Sarah Ann, Mr. Mellor.**

***Breeder, Rose.*—1, 2, and 3. Lady Stanley, Mr. Mellor.**

KIRKSTALL ABBEY, LEEDS.

MAY 29TH, 1860.

The finest places to hold floral exhibitions in the provinces are to be found among our numerous castle and abbey grounds. In the north, numerous though they be, there are few to be compared to Kirkstall Abbey. It is not, however, within our province to describe or depict its beauties, natural or historical. The present exhibition was one, however, to be highly commended, the specimens of stove and greenhouse plants being the principal feature, and the following prizes were awarded :—

Plants.—Twelve stove and greenhouse plants: 1. Mr. Cole, Manchester; 2. Mr. Dyemont, gardener to W. G. Joy, Esq., Headingley. Six stove and greenhouse plants: 1. Mr. Hamlin, gardener to W. Smith, Esq., Gledhow; 2. Mr. Anderson, gardener to — Talbot, Esq., Burley. Eight greenhouse azaleas: Mr. Cole. Four greenhouse azaleas: Mr. Dyemont. Twelve ornamental and variegated plants: 1. Mr. Cole; 2. Mr. Dyemont; 3. Mr. Hamlin. Six ornamental and variegated plants: Mr. Tyson, gardener to J. Bray, Esq., Newlaiths. Four heaths: 1. Mr. Cole; 2. Mr. Dyemont. Twelve pelargoniums (fancies excluded): 1. Mr. Edwards, nurseryman, York; 2. Mr. Eastwood, gardener to F. Tetley, Esq., Headlingley; 3. Mr. Edwards. Eight pelargoniums (fancies excluded) for gentlemen's gardeners: 1. Mr. East-

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wood; 2. Mr. Dyemont; 3. Mr. Eastwood. Six gloxinias: Mr. Anderson. Six cinerarias: Mr. Eastwood. Six calceolarias: Mr. Eastwood. One moss: Mr. Eastwood. Three greenhouse plants (extra prize): Mr. Cole. Two roses (extra): Mr. Eastwood.

The tulips constituted what might be termed the Northern Counties Tulip Exhibition. The Judges were—G. W. Hardy, Esq., of Warrington, and Mr. J. Bailey, Bradshaw Gardens, near Manchester. The notes in brackets are those made by Mr. S. Hartley, of Potter Newton, to whose kindness we are indebted for this report.

Pans of six Rectified Flowers (one feathered and flamed in each class).—1. Charles X. (good); Duke of Devonshire; Purity (Cotrill's), good feathered byblœmen; Atlas, flamed (too much breeder colour); Heroine (fine); Camillus (not open, long enough); Mr. Lea, Barn Houses, Leigh. 2. Sovereign; Vivid, flamed (not well marked); Heroine (fine); Triomphe Royale (not good); Mrs. Pickerill (an ex. ex. fine-feathered byblœmen, perfectly pure, but not fully open, on account of the dull day, a noble sort); Queen Charlotte (heavy); Mr. Godfrey, Chellaston, near Derby. 3. Charles X. (broken in the feather); Pilot (good cup, nice flame); Heroine; Aglaia; Bouquet (slightly yellow in the bottom); flamed byblœmen (*unknown*); Mr. E. Wood, York.

Pans of three Feathered Flowers (one in each class).—1. Royal Sovereign, Heroine, Mrs. Pickerill; Mr. Godfrey. 2. Masterpiece, Heroine, Violet Amiable (a nice flower, but narrow enough in the petal); Mr. Lea. 3. Charles X. (a fine clean bloom), Heroine, Midland Beauty (a fine flower, but too young); H. Steward, Esq., York. 4. Pactolus (feathered bizarre), Maid of Orleans (too old, and broken in the feather), Heroine; Mr. Thornily, Heaton Mersey.

Pans of three Flamed Flowers.—1. Sans Joe (slight stain top of the stamens, but finely marked), Atlas, byblœmen, Aglaia; Mr. W. Lea. 2. Sans Joe (pale colour, not good), Maid of Athens (closed), Aglaia; Mr. Lea. 3. Sanzio (fine for the sort), Violet Amiable (not well flamed), Aglaia; H. Steward, Esq. 4. Everard (not well flamed), Princess Royal (too young), Dixon's Bion; Mr. Thornily.

Pans of six Breeders.—1. Willisson's King, J. Sanderson, Sable Monarch, Willisson's Queen, Willisson's Juliet, and a seedling (good, bold, fine cup); H. Steward, Esq. 2. Pilot (fine form), Sir Joseph Paxton, Sable Monarch (fine and pure), Willison's Queen (closed), Juliet, and Catherine; Mr. Wood, York. 3. Sir Joseph Paxton, Conqueror of World, Sancta Sophia, Willisson's Queen, Juliet, and Gem; Mr. W. Mellor, Wakefield. 4. Willisson's King (finely grown, but a few days too young), Emperor Nicholas (good), William Bentley (narrow enough in the bud), seedling byblœmen (fine cup, good broad petal), Industry (seedling, a fine brilliant colour, but plenty long enough, perfectly pure), Mrs. Lea (rose, ditto, ditto); Mr. Lea.

Pans of three Breeders.—1. Pilot (good), Maid of Orleans (closed), Willisson's Juliet (very pure); Mr. E. Wood, York. 2. Willisson's King, Maid of Orleans, Juliet; H. Steward, Esq. 3. Emperor Nicholas (fine cup), Chancellor (bizarre), Industry (seedling, long); Mr. Lea. 4. Seedling Bizarre (too young), Lord Denman, Morris's Matchless (too long); Mr. S. Hartley, Potter Newton, near Leeds. A stand of six rectified flowers, finely grown, owned by Mr. Wood of York, was disqualified for having two feathered flowers of the same class.

The show was full a week or ten days too early for the Leeds growers. Several brought their flowers, but boxed them after being placed in the stands. The morning was so wild and gloomy that they felt certain the flowers would not open, as they were not fully grown. The second day most of the blooms expanded beautifully. There were seven stands of six broken flowers; seven stands of three feathered; eight stands of three flamed; five stands of six breeders; eight stands of three ditto.

The scene was visited on the first day by from 10,000 to 12,000 people, including most of the principal families of the surrounding districts. The second day, about half the number paid the exhibition a visit. The Band of the Leeds Volunteer Rifles, one of the finest in the country, played a selection of choice music.

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FLOWER-SHOWS AND EXHIBITIONS.

"It is not good that man should be alone," said the Creator of the universe, after He had planted a garden eastward in Eden, and placed Adam in the midst. Created with a will, He knew that not even the charms of a paradise could satisfy that man who, though born alone, had within him the embryo of a love for another—a paradise, too, sown by the hand of God, and watered by mists which, silently bathing the trees at dusk, leave them jewelled, as it were, with tremulous diamonds and opals, to catch the early morning rays, and exhale in incense, at the matins of the birds, from many thousand emerald leaf-patinas and rainbow-tinted flower-salvers.

Something similar, too, must have been the feeling of James I. of Scotland, when he looked from his Windsor prison, where

> "There was made, fast by the tower's wall
> A garden fair, and in the corners set
> An herbere green; with wandis long and small
> Railèd about, and so with trees beset
> Was all the place, and hawthorn hedges knet,
> That life was none . . . .
>
> "So thick the bowers and the leaves green,
> Bestudded all the alleys that there were,
> And middis every herbere might be seen
> The scharpe, and green, and sweete junipere,
> Growing so fair, with branches here and there,
> That, as it seemed, to a life without,
> The bowers spread the herbere all about."

For there he fell in love with the beautiful Lady Jane Beaufort, as she was tending her flowers in the garden of the castle court.

"Woman and flowers," or, more euphonistically, "Ladies and love-wreaths," such is the combination blessed by God, attested by a poet-king, and sung in that land of flowers, Persia, the seat of the paradise of Adam, the country whence came our earliest garden loves, and the language of flowers. In the presence of this sentiment, "Woman and flowers," the old Pagan "Women and wine," the darling toast of the last century, has paled and almost gone out.

A clear day, rare flowers, sweet women and splendid dresses make a fine exhibition; not that the synthesis cannot be thoroughly enjoyed without the latter effect; but the truth is, if we invite ladies, we must permit them to be set out to their own taste—

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which, if at all thoughtfully done, is marvellously well carried out —even as, when we read poetry for its imagination, we are content to allow the poet the use of his own metre.

The combination seems so natural—the latest and the fairest of God's creations, with the most beautiful, most sweet, and most innocent of the eye-ecstacies of paradise—that it will scarcely be believed that to the present century is due the honour as well as the pleasure of flower-exhibitions; and that until 1827, thirteen years after the London Horticultural Society was founded, though a few flowers were grown, ages since, merely for their beauty, and cultivated with some success and much enthusiasm, nearly three centuries ago, there were no flower-exhibitions such as those of the present day.

Gardens, indeed, there were at Babylon, in Greece, and in Rome, asw ell as in Persia, Turkey, Italy, Holland, and France; but in most of these countries gardening, as an improving art, made but little progress until what is called landscape gardening came into favour in England. Yet English gardens, three centuries since, were little better than physic-plots, where "images cut in juniper" abounded, and where the most noticeable flowers and fruit of May and June, according to Bacon, consisted of "pinks of all sorts, especially the blush pink; roses of all kinds, except the musk, which comes later; honeysuckles, strawberries, bugloss, columbine, the French marigold, Flos Africanus, cherry-tree in fruit, ribes,* figs in fruit, rasps, vine flowers, lavender in flower, the sweet satyrion, with the white flower; Herba muscaria, Lilium convallium, the apple-tree in blossom," which were planted and kept in "order," after the Italian, French, or Dutch system, but which really may be said to have never been "cultivated."

One flower, however, "the early tulip," noticed by Bacon as coming in with the "fair maids of February," should not be passed over; for even at this early period the scentless bulb, with which the stolid Dutch so insanely gambled, had found its way into England, and had really begun to be "cultivated" throughout Europe, although it took half a century more to bring the tulipomania to its height, when the variety termed the "Viceroy" fetched two lasts of wheat, four of rye, four fat oxen, three fat swine, twelve fat sheep, two hogsheads of wine, four tuns of beer, two tons of butter, 1000 lb. of cheese, a bed complete, a suit of clothes, and a silver beaker; worth in all 2500 florins.

Curse as all epidemic manias are to the generation immediately suffering, they often, when passed, leave behind a permanent good.

* *Ribes rubrum*, the common English currant, not any of the American varieties.

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Madness for irresponsible empire sent Alva to the Netherlands; a mania for tulips took Dutch and Flemish merchants to the Levant. The persecutions of the first drove over to England, more especially to London and Norwich, the Flemish weavers; the enterprise of the second furnished them with a flower which, though not a native, reminded them of their fatherland, as they watched its gay cups open in the little parterres they cultivated after the loom was stilled. To these poor exiles of conscience tulips, hyacinths, auriculas, and carnations, spoke of home, and bound them to it, as year after year sales of so-called "Dutch bulbs" took place. Then interchange and rivalry kept up the feeling until the demon of bricks and mortar strode over the poor London weaver's rood of earth, and superior cultivation, greater variety of flowers, and better prepared exhibitions, coupled with a depressed silk manufacture, and a poverty-stricken home, left him with but the historic renown of having been one of the earliest western "cultivators" of flowers, and one of the first formal exhibitors of them.

So far as we can discover, Norwich seems to have been the earliest town famous for its flower-shows; close on its heels coming London, followed by Lancashire, the Midlands, the North generally, and the Lowlands of Scotland. These poor men's exhibitions continued right through the Commonwealth, outlived the Dutch gardening, and have never been entirely extinguished, except, perhaps, in London, where railroads, poverty, and the Horticultural Society have taken them out of the hands of the weavers and other artizans, and elevated even the arrangement of flowers for exhibition into an art.

We have shown how early the artizan flower-shows began, yet how unprogressive their state. We have stated, too, how lately the flower-exhibitions on the present model have been evoked; yet how successful they have been the most insignificant of them attests in the size and variety of every species now sent in for competition, as compared with the figured "favourites" of thirty years since; in the number of exhibitions of any note, held every year, which fall not short of 500; in the list of societies of the first-class, amounting to nearly 100, and those of minor importance, computed at more than 150. Yet, after all, the cry of "*Cui bono*" may be raised by the utilitarian, not only against flower-shows, but even against flowers themselves.

Does the crier of "*Cui bono*" wear super-Saxony in place of strong serge? Does he give dinner-parties served up on a splendid China service flanked by silver? Does he adjourn to an ornamented drawing-room, or stroll through a picture-gallery by known artists? Does he do all or any of these things? Then

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has he labelled his back with a condemnation, and written it on every article in his house. Had man been created but to drink beer, and eat cabbage and bacon to repletion, his helpmeet and his children had been gifted, like cows, with an intuitive dislike to buttercups and daisies; but loving, as they do, flowers of all kinds, it behoves him to know the reason of it, and not to stifle that love.

Not that the rigid utilitarians of the present day are numerous or powerful, but a kind of hybrid exists, whose voice is too often heard in the market-place; the man who denies not the beauty of flowers, nor the healthful enjoyment to be obtained from their cultivation, but who classes them with the artificial luxuries of the perfumer, as things only to be indulged in by the wealthy—such men are never lovers of their species, and if their name ever appears in charity lists, it is not charity which leads them to be bountiful. They have become, at length, willing to aid schools of art and design, because French taste had begun to drive their uncouth and untasteful productions from the market; but they would still deny entrance to any but those who intend to make it subservient to trade. Artists must be taught design, but for art must no love be shown by the artizan. They would build fine houses for those who can pay for them, but would limit the journeyman mason to plummet and line, for they cannot see that the capitals to the columns in the Oxford Museum are any the better for their carvers having a love for flowers and a feeling for art.

Let them live. They are the drags to the art-chariot, the arrestors of garden intoxication, which, but for them, might lead to fresh tulip or building manias. They rarely visit our hospitals, they are never found in our madhouses, they take small interest in our schools. Did they do so, they would see at King's College and other hospitals plants and bouquets introduced to solace the sick, conservatories in wards devoted to the insane, flowers in vases in common schools;—all Utopian ideas thirty years since, and deemed the stage-properties of novelists and poets, but realities now.

What advance the cultivation of flowers may make during the next thirty years, it is impossible to predict. To chronicle its progress during the last thirty, even within the metropolis, is not easy. As seen by its externals, we have the laying out of the Horticultural Society's new grounds at Kensington, the building of a large palm-house at Kew, the founding of the Crystal Palace at Sydenham, the projection of the Palace of the People at Muswell Hill, the purchase of the ground for a new cattle and flower exhibition at Islington, the building of small conservatories to houses of twenty pounds' value per year, the adorning of suburban

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cottages and urban residences with garden stands and Wardian cases; and, lastly, the erection of a flower-market in Covent Garden.

As to what might be done in the suburbs of large towns, let us take a lesson from the Chinese, who, into a space of less than a hundred feet square, manage to cram a lake fed by a canal, fountains and waterfalls, flowers, shrubs, fruit-trees, bowers and bridges, rock scenery, a wilderness, and a hermitage. True, all *in petto*, but very much better than the straight walks and square beds to which we are accustomed, solacing ourselves with the idea that want of space forces us to fall in with these remains of the formal garden of the Romans, brought hither nearly eighteen hundred years ago. Chatsworths are not for the million, but such little paradises may be enjoyed by more, and be planted with the sweetest flowers; for the most beautiful, if tolerably hardy, being the most sought after, soon become the commonest; and not even a Mahomet IV., though he shut up the most elegant ranunculuses in his seraglios with his lovely women, could keep them to himself —a Malaval had heard of them, and he did his best to disperse them all over Europe, and succeeded.

JACOB FÖRST.

ON FORCING THE STRAWBERRY.

(*From the Gardener's Weekly Magazine.*)

THERE are several sorts of strawberries that force well, but those kinds I find to do the best are Myatt's British Queen, Keen's seedling, and Mr. Cuthill's varieties. Any of these will succeed to expectation, if a proper treatment be pursued with the plants. It is necessary to have good, strong, healthy plants, and yet with such, great care is requisite to have a suitable soil, a free admission of air, and a *constant* supply of water at all times.

Runners of the previous year are the best plants to take up for preparation; and in order to have a supply, I never cut off the runners from the beds after the end of August, but allow a suitable quantity of beds to remain untouched. Early in spring (about the beginning of April), I take up the runners, with all the roots I can get with them, and put three plants in a pot of seven inches in diameter by six inches deep. The soil I use is a strong rich loam, well enriched with rotten dung. After potting and watering, I have them plunged into the ground, in an open, sunny situation, up to the rims of the pots. For a few days I shade the plants from sun, by covering them with mats. During

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summer I am careful to give a supply of water, if the season be dry, and to keep the pots clear of weeds. As winter approaches, I spread a small portion of old spent bark from the pine pit amongst the plants, to prevent them from being injured by the force of frost raising up the ball of soil out of the pots, or by the soil expanding so as to break the pots. When I judge that the severity of the winter is over, I remove the tanners' bark, and carefully stir up the surface of the soil inside the pots, take out about half an inch deep of the old soil, and replace it with well-enriched mould. The surface between the pots is also stirred up and made smooth. Attention to watering, and keeping free from weeds, is likewise paid.

During this, the second summer, most of the plants show blooming spikes, which, as soon as observed, I cut away by means of a pair of small-pointed scissors. This attention is paid throughout the season, and by the end of autumn the plants are in fine condition for forcing.

The period I commence forcing is, for the first crop, the first week in January, and once a fortnight afterwards, to the middle of April. By introducing the plants at these periods, a regular supply of fruit is afforded me. When I take in the pots, I have them well cleaned from soil, all decayed and dead leaves removed, and the soil at the surface loosened, about half an inch taken away, and replaced with some good rich soil, well mixed with rotten dung. The pots are placed upon shelves sustained by iron brackets, and flues that are as near to the glass as convenient, some being within a foot, and the most distant about a yard. Each pot is placed in a saucer. The house I introduce them into is a vinery, from which the vines are excluded to the end of February, and China beans and cucumbers are forced in the house up to that time. In addition to forcing in the vinery, I have a pit heated by steam, and in this pit I force them to great perfection. I have also succeeded well by forcing them in a dung bed frame, and when the fruit was beginning to change colour, I removed the pots into the vinery, or steam-pit, to ripen off. This is necessary, lest the dung heat impart a disagreeable flavour to the fruit, which it will do if there be a vigorous heat in the bed. The heat at which I keep both the vinery and pits, when nothing else is forcing of greater importance than the strawberries, is, to commence at 56°, and to keep that for a fortnight; then to raise to 65°, at which it is kept till the fruit is set, when I gradually raise it to about 70°.

In supplying the plants with water, I do not pour it into the saucers, as is too generally done, and from which circumstance

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the soil becomes very sour at the bottom of the pots, by having stagnant water kept there; but I pour it upon the surface of the pots, taking care that the plants never lack a supply. I find it of advantage to the swelling of the fruit to a good size, to water occasionally with liquid-manure water. When the fruit is fully swelled, it will be found that so much water as before given will not be required. A free admission of air to the plants is very essential; this is better furnished by having the plants as near the glass as possible.

After the crop has been gathered, I throw the plants away, if I have a good supply of the sort growing in the garden; otherwise I have the plants taken out with entire balls, and planted out in a bed for a successive supply of runners.

Where a private establishment has to be supplied with this delicious fruit, it would be advisable to have different kinds. The Alpine produces the latest crop of any kind; it will bear well even in autumn. The best plan with this is to raise plants from seed, sowing early in January, in boxes placed in a moderate temperature, inuring them gradually to the open air. I pot them off in May, and plunge the pots in the ground, as done to others; in the autumn they will show bloom, and are then taken into the house for forcing.

If worms have got into the pots, I pour in a little lime-water (once or twice is sufficient), which destroys them.

Frodsham. THOMAS HAYES.

CULTIVATION OF THE VINE.

(*Continued from page* 158.)

THE beginning of November the sashes should be taken off and laid in a dry place until again required; free exposure will now be a help to the perfect ripening of the wood. Should the house, however, be in a situation where the want of sashes would appear unsightly, let the sliding portion be run down full length. The latter end of this month the vines are to be pruned, and the leading rod cut to four feet and a-half, the lower to two eyes. During winter all vine borders should be protected from frost and wet, so destructive to the spongioles or feeders. Any person can satisfy himself as to this by examining unprotected borders in the spring, when he will find all the small fibres entirely rotted; this cannot proceed from any other cause, as vines kept dry in pots (when dormant) and safe from frost, retain their feeders uninjured. A covering of any material, provided it be impervious

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to wet, will answer, but the best and most secure would be roofing-felt, supported by lengths of wood, and temporarily fastened with nails. This, with care, will last for years, and amply repay the expense incurred.

In February let the vines be thickly coated over with the following wash:—To half a gallon of tobacco-water, made to boil, put three and a-half pounds of soft soap; stir over the fire till dissolved, then add three pounds and a-half of flowers of sulphur; let all be well blended, and laid on with a small paint brush. I have found this wash effectual against even the appearance of mildew, and I have no hesitation in stating that if proper attention be paid to ventilation, etc., no vine disease can have existence. If the house has been uncovered, the sashes should now be put on, and from the middle of the month those that slide are to be drawn up at night and let down in the day.

When the buds begin to swell, moderate fire-heat may be allowed, sufficient to keep the thermometer at night to 50°; let the vines be gently syringed with tepid water in the mornings; this will soften the bark and assist the buds in breaking. Why I say gently syringe is, I don't wish as yet that any of the wash be removed, for when foliage is produced it has a desired effect. With sun-heat the thermometer may rise to 60° before giving air. From the two eyes left at bottom for succession wood (when pruning) shoots are to be trained up the wires, the lower stopped at two feet, the leading one at five, and the two upper shoots on the bearing rod to be handled in the same way. After the bunches are fully developed on the other shoots, stop at one joint above the first show. Don't allow more to remain; one good bunch is better than two bad ones, and by timely stopping, the sap is directed to its development. Before growth has quite arrived to this stage, syringing in the mornings must be discontinued, and given in the evenings instead; the sun gets too suddenly hot at this season, and before evaporation could carry off the moisture, would act upon the foliage injuriously. Close up early, so that the mercury may stand at 70° before syringing, which should not be done except on sunny evenings. Should the nights prove chilly, give a little fire-heat to cause a rise to 55°, and, before ventilating in the morning, to 65°. It is to be understood that the floor of the house is to be kept moist, not a particle of dry earth should appear, and if the house be heated by hot air, the pans or tiles should be kept filled with water. The shoots that are showing fruit should be tied to the wires; when coming into bloom, syringing must be discontinued until after the fruit has set. At this stage, with sun-heat, the thermometer may rise to 70° and 75°. Grapes like a brisk heat when setting,

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and this is not too high, but afterwards let 65° to 70° be the medium. Forcing at this period would be out of place. I have only recommended a little fire-heat to assist nature, and, as the season gets advanced, the warmth of the atmosphere will keep the temperature to the degree required.

For the summer pruning a knife ought never to be applied; the finger and thumb, if proper attention be paid, can perform all that is necessary. Every week or eight days the vines ought to be gone over, and the laterals on the shoots for bearing wood next year kept confined to one eye; should the eye above the bunch break, stop it again. When the berries are as large as middle-sized peas, they are to be thinned; by expanding and tying the shoulders of the bunches to small twigs, the operation can be performed with ease, and will leave the grapes more room to swell. Many cut away some of the clusters, but this should be avoided, as in the formation of the bunch they are regular, and taking them off must cause irregularity. Thin well—not sparingly; leave plenty of room—large grapes will be the result. Necessity for a second thinning ought not to occur: to be obliged to cut away grapes when they get advanced is, to say the least, bad judgment.

Previous to colouring, the skin of the berries becomes thin and transparent; more watchfulness must now be exercised in giving air early in the mornings, and not allow the heat to get excessive before ventilating. If this be neglected, the vapour of the house will condense on the glass, and fall on fruit and leaves, comparatively speaking, like scalding water. To this and sudden draughts can shanking alone be attributed. Many are of opinion that this disease proceeds from the border: but when the border makes wood that produces a good crop, it has done its part, therefore fault of it, or the soil, is out of the question; the interior management is alone blameable. When a change of colour is visible, a few of the sashes may be left a little way down at night. This is the time that black grapes are made so, and not brown; plenty of ventilation is the secret. As the fruit approaches maturity, water must be withheld; it is a dry interior that gives a rich flavour. In the winter pruning the second year, the lower rods are to be shortened back as in the first, and the two above to the same proportions. All the spurs that bore are to be cut closely off at the stem, the young wood will now supply their place.

The border to be slightly forked over, giving a little well-decomposed manure, then some dry litter spread on, and protected with the covering. Should it be wished to have grapes earlier this season than last, the vines are to be coated over with the wash the beginning of February, and the sashes drawn up at

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night, the covering to be removed, and if the earth appear dry, the border to get a good watering, and about from twelve to fifteen inches of leaves or spent tan put on, and again covered. Stable-dung and leaves are advocated as suitable fermenting materials, to be kept turned and renewed as necessity requires. On unprotected borders this I consider a dangerous practice, and ought not to be followed; for should they be put on of a sufficient depth to maintain heat for any length of time, fermentation would be too great; and were they applied to a less extent, heavy rains would reduce the heat too much to be effectual, and by renewing it a check would still be given before fermentation could again set in. My conviction, from long experience, is so firmly established on the impracticability of this system that I repudiate it altogether. The tan or leaves, when kept covered, will keep a nice growing heat without any more trouble or risk of check. We will suppose forcing to commence the middle of this month, 45° at night, and 50° to 55° sun-heat. Nature must be coaxed slowly, and the buds get time to develop: to bring them off strong and vigorous should be the aim. When they are breaking the heat may rise to 50° by night and 60° by day: and if sun-heat does not rise to this, fire-heat to be given, so that air may be admitted to strengthen the growth. As they advance, heat to be increased by degrees to 65° by day, and to 55° at night, and when coming into flower 70° to 75° by day. 60° at night, always allowing from ten to fifteen degrees of a fall at night. All Nature requires rest: and when we look to hot summer days and the decline at night, we receive instructions to be guided by. Exhalation having been prevented by the covering, the border will not require water until it is removed, which it should be the beginning of April. Should it then be found that moisture is required, the tan or leaves can be turned over and water given, cover again with the roofing-felt to the end of this month, the tan or leaves must then be reduced by degrees, when all protection may be safely taken away the second week of next month. The third year furnishes the house to the top with short rods. It was unnecessary to allude to the ventilators in the back wall sooner, as there was no exposure of the young growth, by letting down the sashes; but now that it has reached to the top, and when the fruit next year will also be exposed, recourse to them will be found of the greatest advantage, when harsh and easterly winds prevail, by opening them, and letting down a few of the sliding sashes two inches or so, that the heated air may escape. The temperature can be regulated without danger. From the first and second week in June, all fire for the present is to be discontinued, the sun is now power-

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ful, and the attraction of the glass is quite sufficient without additional heat.

In late houses a little fire-heat in the autumn to ripen the wood, and in the winter where fruit is hanging, a fire at times (when air is given) to carry off all damp, will be requisite. The heat mentioned throughout is for the following varieties:—Black Hamburgh, Black Prince, Royal Muscadine, Dutch Sweetwater, Prolific Sweetwater, and Golden Hamburgh.

Varieties that will require at least five degrees more heat:—Muscat of Alexandria, Cannon Hall Muscat, Grizzly Frontignac, White Frontignac, Bowood Muscat, Purple Constantia, Barbarossa, Mill Hill Hamburgh, and West St. Peter's. Those two classes are good, and will not disappoint.

Forcing the third year can be commenced at will, but from the middle of January to February will be more certain, and then, if wished, from the 1st of January after, which is early enough to begin any season. It is hazardous to commence earlier with any fair prospect of a good crop. When once vines are habituated to forcing, the sap will rise periodically without heat at the same time, so that forcing, if begun at the proper season, can be carried through by attention, without risking a crop.

I have only given a description of a house for early working, and of three rods in the length: later houses with a greater span must have more rods in proportion, and if width will afford it, pits kept filled with leaves. The moist heat proceeding from fermentation will be of great service, nearly doing away with the necessity of fire-heat.

There are no diseases that the vine is subject to but those of mildew and shanking—the former an epidemic, the latter generally caused by want of attention. I am now grown white in the service of horticulture and aboriculture, and I feel quite confident that the wash recommended is efficacious against the vine mildew and other fungi.

There are now three bearing rods in lengths, and three trained to take their place, with a provision for a succession from those stopped at two feet.

Of all the sciences, those of horticulture and agriculture are the most useful, for on their productions the human family subsists, and, therefore, any encouragement for the advancement of those professions cannot be too highly appreciated. Were I possessed of the highest gifts, I would look upon them as secondary to the happiness of being in any way instrumental in adding to the necessaries or enjoyments of my fellow-men.

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HINTS.

FLOWER-STAGING.—At the Crystal Palace the stands on which the tulips were exhibited were all alike in size, form, and colour, Could not this be adopted at other of our great shows, not only in tulips, but in other flowers? We are glad to see the system is to be carried out at the National Dahlia Exhibition.

BROOMS *versus* FLOWERS.—Now-a-days, prizes are awarded not only for the flowers themselves but also for the ingenuity displayed by the owners. Is this rational? Pelargoniums, calceolarias, cinerarias, and chrysanthemums are literally as full of sticks as a birch broom. Will not some society offer prizes for plants without sticks? We are far too artificial. All these plants might be grown, and grown well too, without so much assistance being rendered to Nature. As a work of ingenuity they are admirable; as a work worthy of a florist, however, they cannot be. A change in this respect is sadly required.

PANSIES IN POTS.—At the Crystal Palace we saw a very pretty collection of pansies in pots, well bloomed, and they attracted considerable attention. At early shows we would particularly recommend societies to include them in their schedules. The method is far before cut blooms for effect. Will the Crystal Palace and the Park offer prizes next season? A paper appeared in our March number from a distinguished amateur, who, we believe, has been very successful. Mr. Dobson, too, includes the subject in "Work to be Done."

THE BALSAM.

(*From the Florist.*)

WHEN well grown, the balsam is perhaps the showiest of all our annual plants, and the one best adapted for conservatory or house decoration from July to September; but then it requires, I may say, daily attention to grow it, with the requisite vigour, to result in good, handsome specimens, thirty inches high, and nearly as much through, with each branch covered with bold double flowers, as large as a carnation, and double as *Camellia imbricata*. Specimens of this kind are, however, attainable with the assistance of a good garden frame or pit; but they require, as noticed above, good cultivation to get them up to the mark; and, with the object of showing how plants, such as are described, may be grown, I will briefly record my own practice, from the present date, supposing the plants to be now in 60-sized pots.

Let me first give a short rationale of culture.

Free growing, semi-succulent annuals, as the balsam, require—

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1stly, all the light our climate affords, which suggests clean glass, and that the plants, during all the stages of their growth up to blooming, should be kept as near it as is practicable. 2ndly, a rich open compost to grow in, through which the roots will readily ramify and penetrate, and rich enough to furnish them with food sufficient to keep the top growing freely; the great demand made on the roots during the period of active growth informs us that liquid manure is a useful auxiliary to keep up the vigour of the plant, and may be applied freely when the pots become full of roots. 3rdly, bottom-heat, to give every encouragement to a free growth—the application of a mild bottom-heat from the first stage of the plant's growth till the bloom buds are formed, should be maintained; when the buds are all duly formed, and any further extension of growth unnecessary, the bottom-heat should be allowed to die gradually away, so as to harden the plants, to bear the comparatively cool temperature of the conservatory for blooming. 4thly, air during every stage of growth; the balsam requires a large supply of air, that the plants may not become drawn and slender, but keep a short-jointed, stocky habit, which will enable the lateral branches to support themselves without stakes until the blooms expand, when they will be required.

The soil I prefer is half-decayed turf, calcined clayey loam, horse-droppings, half rotten, and rubbed through a half-inch sieve, and bone-dust. The clayey loam I calcine sufficiently, and it acts as a drainage to the soil; in the absence of this ingredient, soft bricks broken to the size of filberts may be used. The turfy loam may comprise rather over one-half the mixture, the dung and drainage material the other. A handful or two of bone-dust may be used or not, as it may be at hand; for sowing and potting into 60-sized pots, well-decomposed leaf-soil answers as well as the compost.

From a 60-sized pot the plants are transferred to 6-inch pots. The compost is used rough, merely spreading a little of the fine soil over the surface, to prevent its drying too rapidly. I grow my plants, for the present, in a three-light frame; there is now a slight bottom-heat, and I lower the inside of the frame, so that there shall be six inches clear between the top of the plant when plunged and the glass, and also room for half a brick to be placed under each pot. As the plants are placed on their bricks, the space between the pots is filled up with tan, or the plunging material taken out. The temperature is not allowed to exceed 75° or 80° by day, and 60° by night—giving air early in the morning, and increasing it as the days get warmer, but never closing the frame entirely. Water when the soil in the pots gets

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dry, and gently sprinkle the foliage overhead in the afternoon. When the plants begin to touch the glass, remove the brick from beneath the pot; and, by the time they again reach it, they will be ready for another shift into 9-inch pots;—compost, as before, and we bury the ball in the pot a little deeper each shifting. The plants will now require a great deal more room each way, as the growth of the lateral branches will be considerable. And whether still grown in the same frame, or removed to a deeper one, or a pit, the bottom-heat must be kept up, say about 80°, with the brick or bricks underneath, to allow for lowering the plants as they grow up to the glass, that they may be always near it. The time when I get them put into 9-inch pots is generally the middle or end of July, at which time buds will have commenced to form freely; and therefore, at this stage, the plants will require individual inspection, to see which are going to produce double flowers, and which not. All the latter must at once be thrown away; and when you are satisfied that those you have left for growing are producing double blooms, every perceptible bud should be instantly removed, to allow the plants to grow and fill the pots with roots before allowing them to bloom. If you keep the foliage healthy, as our treatment will do, fresh buds will soon form in the axils of each leaf down to the base, and there is, therefore, no danger in removing the buds from the plants up to the time they are fully grown. A portion of the plants may be allowed to bloom in 9-inch pots; indeed, for the dwarf varieties, this sized pot is large enough—but to have fine specimens, the plants should again be shifted into 12-inch pots as soon as the roots have well reached the side of the ball of the former shifting. These sized plants will require a deep pit, and to stand a great width apart; three feet, or even more, will not be too much for the best plants. Again, place the pots on bricks, and give a slight bottom-heat; in a fortnight's time from the last potting, the pots will be again filled with roots; and the bottom-heat may be allowed gradually to decline, and the side branches should be neatly tied out. The plants should also now be daily inured to a cooler treatment, by well tilting up the sashes, and entirely removing them on mild quiet days—avoiding heavy rains and high winds. These plants will commence blooming towards the end of August, and will continue for a month; those in the 9-inch pots will bloom a month earlier. Weak guano-water must be given them alternately with clear soft water, from the time the 9-inch pots are filled with roots, up to the time the plants show indications of exhaustion, and when the best of the bloom is gone. A few plants with the best flowers, and most striking colours, should be removed to a light airy house, moderately warm, to ripen their seeds.

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My large plants average three feet, including the pot, by two feet six in diameter, and are perfectly symmetrical. There are two modes of training; one is to allow the main stem to grow, and tie out the laterals, forming a kind of obtuse pyramid when complete; the other is to pinch off the top when in the 6-inch pots, and select five, seven, or nine of the best lateral shoots for training. These generally make the most uniformly-shaped plants; in the latter case, the shoots should be tied into place as soon as they are long enough, and re-arranged when shifted into larger pots. When in bloom, no finer plants for the season are to be found for conservatories, sitting-rooms, or for filling vases, baskets, etc. IMPATIENS.

RHYNCHOSPERMUM JASMINOIDES AND TAPERING HOLLBOLLIA.

ONE of our correspondents asks for a description of these two plants, which we append. *Rhynchospermum Jasminoides* is a greenhouse climber, a slender, climbing evergreen shrub, rooting along its branches wherever it touches a damp surface, like the ivy does. When wounded its branches discharge a milky fluid. The young shoots are slightly downy, the leaves opposite, oval, deep green, quite smooth, sharp pointed, with minute scale-like glands in the place of stipules. The flowers are white, deliciously sweet-scented, and produced in small irregular corymbs on the ends of peduncles considerably larger than the leaves. Their calyx consists of five small, smooth, convex sepals, rolled backwards, and much shorter than the tube of the corolla, with a very shallow-toothed, glandular ring surrounding the base of the latter. The corolla is about three-quarters of an inch long, pure white, salver shaped, contracted in the middle of the tube, with a partially-spreading border, whose five divisions are wedge-shaped, truncate, and twisted obliquely. The anthers are five, arrow-headed, placed just within the orifice of the tube, and separated by two slightly-elevated, hairy lines. The ovary consists of two separate carpels, and is surrounded by five oblong, green, emarginate, hypogynous scales, which sometimes are slightly united at the edge. The *Tapering Hollbollia* is a half-hardy evergreen climber, and is thus described in the "Horticultural Journal:"—"This is an evergreen, twining plant, of the habit of Hollbollia latifolia, from which it differs in having very taper-pointed, not blunt leaflets, racemes whose stalks are much shorter than the leaf-stalks, and purplish flowers not half the size. Like that plant, it is deliciously fragrant. Hitherto, male flowers only have been produced.

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It has been treated as a greenhouse climber, but it is probably hardy; it grows freely in a mixture of sandy loam and rough peat, and is increased by cuttings. Its sweet-scented flowers, resembling the orange in perfume, and nearly evergreen foliage, make it a desirable plant either for the greenhouse or open air."

SPELLING AND WRITING.

At the present time, much agitation is taking place with regard to the education of gardeners. The spelling correctly of the various subjects is, after all, a matter of great importance, and nothing is more offensive to the eye of the amateur than to see the most flagrant errors, with respect to correct spelling, creeping even among our stages at the flower-shows. How many plants, too, we find without names altogether, and we confess with sorrow that this becomes more and more prevalent. Labels decay, and the writing is frequently obliterated, is generally the excuse. Generally speaking, the plant, when it arrived from the nursery, was properly named; but this is, alas, too frequently merely written on plain wood, with only a moderately good pencil, and the consequence is, that the first shower makes it dim, the second makes it illegible, and the third expunges it altogether. Amateurs there are, however, who have carefully used white-lead and zinc labels, writing the name while the paint has been wet; these have become one of the best labels we know of. The production is not, however, always convenient; white-lead will not always keep good or moist, and is not always at hand. We have, however, had our attention drawn to a new patent, taken out by Mr. Arthur Dunn, and is termed the patent solid marking-ink pencil. We have ourselves used it on wood, zinc, and parchment. There need be no preparation whatever, although in the case of zinc, if immersed in one part aqua fortis, two parts of spirits of salt, and fourteen parts of water, and then washed in clean water, and dried, the marking will be much more plain. Wood is also the better for being steeped in a little soda and water, but these may be done and a stock kept, only requiring to be damped previous to their being used. When written on, and exposed to the light, it is quite indelible, and nothing short of some chemical agency will destroy it. In all the tests to which we have submitted the production of the pencil, it has answered our fullest expectations. Practical men have given their testimony, and we are sure that so convenient, so useful, and so neat a production, at so low a price, will meet with a very great demand among our readers. The pencil is got up in Lund's patent case, is ever-pointed, and the price is only eighteenpence.

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HOW SEEDS GERMINATE.

We gardeners, generally speaking, are strangely indifferent as to the why and wherefore. We procure seed, we sow it, and wonder why its production should only be a very limited number of plants. But how few ever consider how many causes there are, and how many really physical properties are required in the proper development of the plant. The seed (says Professor Gray, referring to the convolvulus) first imbibes some moisture through its coats, swells a little, and as it feels the warmth, the embryo gradually wakes from its long and deep sleep, and stretches itself as it were, that is, the tiny stem of the embryo lengthens, and its end bursts through the coats of the seed; at the same time the two leaves it bears grow large, straighten themselves, and so throw off the seed-coats as a loose husk. This allows the seed-leaves to spread out, as leaves naturally do, and so the seedling plants stand revealed. At the very beginning of its growth, the end of the little stem which first comes out of the seed turns downwards, and points into the earth. From it the root is formed, which continues downwards, branching as it grows, and burying itself more and more in the soil. The other end of the stem always turns upwards, and as the whole lengthens, the seed-leaves are brought up out of the ground, so that they expand in the light and air, which is the proper place for leaves, as the dark, damp soil is for the root.

What makes the root always grow downwards into the ground, and the stem turn upwards, so as to rise out of it, we no more know than we know why newly-hatched ducklings take to the water at once, while chickens avoid it, although hatched under the same fowl, and treated just alike. But the fact is always so, and although we know not *how*, the *why* is evident enough, for the root is thereby at once placed in the soil, from which it has to absorb moisture and other things, and the leaves appear in the air and light, where they are to do their work.

Notice how early the seedling plant is complete, that is, becomes a real vegetable, with all its parts, small as the whole thing is. For it already possesses a *root*, to connect it with the ground and draw up what it needs from that; a *stem* to elevate the foliage into the light and air, and *leaves* to take in what it gets directly from the air, and to digest the whole in the light. It already has all the *organs* of vegetation, all that any plant has before blossoming, so that the little seedling can now take care of itself, and live—just as any larger plant lives upon the soil and the air. And all it has to do, in order to become a full-grown plant, is to increase the size of its organs, and to produce more of them, namely, more

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stem with more leaves above, and more roots below. We have only to watch our seedling plants a week or two longer, and we shall see how this is done.

The root keeps on growing under ground, and sending off more and more small branches or rootlets, each one adding something to the amount of absorbing surface in contact with the moist soil. The little stem likewise lengthens upwards, and the pair of leaves on its summit grow larger. But these soon get their full growth, and we do not yet see, perhaps, where more are to come from. But now a little bud, called the plumule, appears on the top of the stem, just between the stalks of the two seed-leaves; it enlarges and unfolds into a leaf; this soon is raised upon a new piece of stem, which carries up the leaf, just as the pair of seed-leaves were raised by the lengthening of the radicle, or first joints of stem in the seed. Then another leaf appears on the summit of this joint of stem, and so on. And so the plant grows on the whole summer long, producing leaf after leaf, one by one, and raising each on its own joints of stem arising from the summit of the next below.

Growth requires food in plants as well as in animals to grow into a plant. The embryo in a seed must be fed with vegetable matter, or with something out of which vegetable matter can be made. When a plant has established itself, that is, has sent down its roots into the soil, and spread out some leaves in the air, it is then able to change mineral matter, which it takes in, into vegetable matter, and so to live and grow independently. But at the beginning, before its organs are developed and established in their proper places, the growing plant must be supplied by ready-made vegetable matter, furnished by the mother plant. On this supply the embryo germinating from the seed grows and feeds just as the new-born animal does upon the mother's milk, or as the chick developing in the egg does upon the prepared nourishment the parent laid up for the purpose in the yolk.

Tear open a fresh convolvulus seed, or cut a dried one in two, and this supply will be seen in the form of a rich and sweetish jelly-like matter, packed away with the embryo, and filling all the spaces between its folds. This is called the albumen of the seed, and this is what the embryo feeds upon, and what enables its little stemlets to grow and form its root downwards, and carry up and expand its seed-leaves in the air, and so become at once a plantlet, with root, stem, and leaves, able to take care of itself, just as a chicken does when it escapes from the shell.

This moist, nourishing jelly would not keep long in that state, so when the seed ripens and dries it hardens into a substance like thin dried glue or gum, which will keep for any length of time;

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and whenever the seed is sown and absorbs moisture, this matter softens into a jelly again, or gradually liquefies, and the seed-leaves crumpled up among it drink it in at every pore. A portion is consumed in their growth, while the rest is carried into the growing stemlet, thence into the root forming at the end of it, and into the bud, which soon appears at the other end of it, supplying the materials for their growth.

Notice the same thing in wheat, oats, or Indian corn. The last is the best example, because the grain is so large, that all the parts may be clearly seen without magnifying. The abundant milk, or soft and rich pulp of green corn, is the same as the jelly in the seed of the convolvulus; namely, in its albumen of the seed provided for the embryo to feed upon when growth begins. This nourishing food was produced by the mother plant during the summer; was accumulated in the stalk at flowering-time, in the form of sugar or syrup; was conveyed into the flowers forming seeds; a part was used to form the germ or embryo, and the rest was stored up with it in the seed, to serve for its growth into a plantlet the next spring. That it may keep through the winter or longer, the sweet milk is changed into a starchy pulp, which hardens as the grain ripens into the firm and dry mealy part, or albumen, which here makes the principal bulk of the seed. But when sown this meal softens, and is slowly changed back into sugar again, and this is dissolved in the water the seed takes in, makes a sweet sap, which the embryo imbibes and feeds on as it sprouts. That the meal or starch of the grain is actually changed into sugar at this time is clearly shown by malting, which is merely causing heaps of grain to sprout a little, and then destroying the life of the embryo by dry heat, when the grain (now malt) is found to be sweet, and to contain much sugar.

All seeds do not germinate alike, and in our next we shall notice the pea, bean, and stone fruit.

GLENNY'S FORGET-ME-NOT.

Mr. Glenny has added another to his already numerous works on horticulture, and has adopted the above title. The volume is full of illustrations, and of entertaining and instructive matter. We quote the following among other equally commendable pieces:—

"Gooseberry and Currant Standards.—Many years ago, we strongly recommended gooseberry and currant trees to be grown as standards, for the advantages are manifest:—First, the fruit is so far from the ground that they escape the dirt which, in

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hard rains, splashes up to dwarf trees, and covers them with mud and grit; secondly, the fruit is much easier thinned and gathered; thirdly, the ground beneath them is kept clean with less trouble, and suckers more readily seen, and promptly destroyed; lastly, the ground underneath can actually be cropped, if ground be scarce and room an object. The trouble of training has prevented the plan from being generally adopted; but we paid a visit to one garden at Epping, where the style was well carried out. Both gooseberries and currants were from two to three feet high in the stem, and nothing could look better. Of course, we must begin with the cuttings, and let none but the centre shoot go up. The sides at pruning-time must be trimmed close part of the way up, and it may, perhaps, be the third year before they have attained the height required. They may then be stopped, and the side branches near the top taken back to two or three eyes each, and all below continually removed. When any buds appear down the stem, they should be rubbed off, and not be allowed to grow at all. They will require as much looking at and attention as a standard rose; for there will be just the same struggle to grow and throw up suckers as there is in the stock or briar; and you must be careful when a sucker appears to trace it home to its base, and take it close off, not leaving a bit to grow again. Too many cut them off below the surface and fancy they have done all that is required. They will soon, however, find that four or five will come up instead of one, and the evil will be increasing every year. The pruning of such trees, year after year, must be similar to that of dwarfs, the only difference being that the one is on the ground, and the other three feet above it. Again, there are many of the gooseberries whose habit is pendulous, and, when raised three feet from the surface, they form handsome objects; but the convenience for gathering, when all the fruit is in sight, is so great, when compared with the trouble of stooping down and holding up the branches, which actually trail in the dirt, that, setting aside the superior appearance and cleanliness of the fruit, that alone would be sufficient to warrant growing them all as standards."

"Tricks of Trade.—Whoever may read of the adulteration of food, and of fifty other articles that are in general use, may have also fairly concluded that it is next to impossible to obtain anything pure. But would anybody believe that it was possible to cheat them with a flower? Yet the sanding of sugar, mixing plaster of Paris in bread and flour, grinding roasted beans in coffee, substituting sloe-leaves for tea, and such like tricks, are not more palpable frauds than have been practised upon the public in the purchase of those beautiful works of the Creator—

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flowers. In our younger days, before the fancy-tipped dahlias were known to any extent, an Englishman was hunting after novelties on the Continent, and was invited by a dealer to call on him at a particular time, and take a look at two plants of extraordinary beauty, a purple and a scarlet regularly tipped, every petal perfect, even those of the half-opened blooms exhibited the peculiarity that rendered the variety invaluable. As soon as the astonished novelty-hunter was satisfied, the dealer cut off the flowers, and sent them away by his man, informing the would-be customer that they were going off to a distant connoisseur, and in vain the enthusiastic Englishman begged for only one: the dealer was inexorable, and offered large prices for the stock. The Frenchman walked his visitor round the grounds, and when they returned to the two plants, which had not a flower left on them, the half-crazy beholder doubled his offer, if he might take up the roots then and there; to which the seller agreed, with every symptom of reluctance, expressing his belief that if he kept them till the shows came off in the metropolis, he could make four times as much. Up they were dug, the tops cut off, the roots carefully packed for travelling, and the money paid. They were merely fumigated with brimstone; and any of our readers may try the experiment for amusement, not only with a dahlia, but any other strong-coloured flower. The effect is beautiful, and lasts, perhaps, an hour or two. It can be tried with a bunch of matches, by merely holding the bloom over while they are burning. The buyer never found his mistake till the following year, and then the seller was *non est*. The buyer never owned the transaction; but years after we heard the Frenchman boast of the trick, and the poor buyer was then no more. The trickster said that he did not press the purchase; the buyer would take no denial, and when he declared his intention to take up the roots (the Frenchman, who declared he meant originally to have his joke out, and then undeceive his customer), the temptation was too great, as it must be a year before it came to light. But the secret of tipping flowers by such simple means has been known many years, and it has enabled many a joke to be played off by presenting a bloom beautifully marked, knowing that it will soon be all of a colour. But this is only one of many tricks played with flowers. To such an extent has it been carried, that thousands of pounds per annum have been made by cheating. There is a sort of standard by which the value of flowers is estimated, and the nearer a new one approaches that standard, the greater its value. It is to be regretted, then, that there are means by which a worthless variety can be made to appear valuable: some, by cutting out the centre which is bad, and closing the other parts over it, to make

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it look well; some, by pulling out different florets and petals whose presence make it good for nothing; some, by forcing open petals which naturally come like so many pipes or quills; and we are sorry to say there are men who have, by such disreputable means, worked their way up from common mechanics or journeymen gardeners to men of money. Ladies and gentlemen have attended exhibitions, seen very fine-looking flowers, made memorandums of their beauty, ordered them, and when they bloomed in the buyer's garden in their natural state, they have been disgustingly bad. The first impression is highly detrimental to the gardener, who is supposed to be deficient in skill; but when matters are explained, all that can be done is to avoid ordering in future anything on the ground of its appearance at a show. But men can make their fortunes, if they only take in everybody once, and so the thing goes on from year to year, all the young beginners and inexperienced gardeners being an easy prey, and the cheating dealers in novelties being ready to pounce on them, like hawks upon sparrows. The press, however, has done much towards destroying this kind of trade. The public will, nevertheless, be always subject to the misrepresentations of certain dealers, who offer novelties as flowers and plants of the first class when they know them to be otherwise. There is only one way of avoiding this—never buy a new thing in the year it is offered, unless you have some positive assurance of its superiority, because the next year it may be had for a fourth—perhaps, a tenth—of the price demanded at letting out. We have been taunted times out of number about refusing our sanction to flowers the first year, and afterwards recommending the things we condemned; but it should be remembered that we condemn things as half-guinea novelties, but approve of them at sixpence or a shilling. We can look back with pleasure to things that we have recommended—Dobson's Dwarf White Phlox, Calceolaria, Aurea floribunda, Carter's Prolific Raspberry, Chapman's Prince of Wales Plum, and many other subjects, that are as much esteemed now as they were years ago when they first came out; and if we go to florists' flowers that we have approved, there is scarcely a good one in cultivation that we have not singled out from the thousands of rubbish sent to us for our opinion. It would be a very tedious task to wade through all the means adopted by what may be called floricultural cheats, but it is a sad thing that the lovers of flowers should be subject to such gross impositions."

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NATIONAL ROSE SHOW.

JULY 12th, 1860, will henceforth be one of the red-letter days among rose growers and rose showers. To describe the scene which the Crystal Palace presented on the occasion would almost be presumption on my part. Suffice it to say, that I have attended every national rose show yet, and at none have I seen so good a display either in quantity or quality.

Nurserymen.—One hundred blooms, or rather trusses of three blooms each. Mr. Mitchell, of Piltdown, Maresfield, carried off the palm; his roses were really magnificent. To particularize any in particular, would be almost out of place, as I have already in preparation "Notes on the Roses." Mr. Paul, of Cheshunt, came next, closely followed by Mr. Hollamby, of Tunbridge Wells, and Mr. Cranston, of King's Acre, Hereford. Fifty blooms were also ably represented by Mr. Cant, of Colchester, Mr. Hollamby, Mr. Tilly, Bath, and Mr. Turner, Slough. In twenty-four, Mr. Keynes, of Salisbury, was quite up to the mark, and exhibited a splendid stand. Mr. Lane, of Twickenham, Mr. Paul, and Mr. Clarke, of Brixton, were also competitors.

Amateurs employing a gardener made an excellent show. In forty-eight varieties, J. T. Hedge, Esq., of Colchester, was first; followed by the Rev. S. R. Hole, of Caunton Manor; C. M. Worthington, Esq., of Reading; and C. J. Newdegate, Esq., of Nuneaton. In twenty-four varieties, J. T. Hedge was again first, and was followed by C. J. Newdegate, Esq., J. Barchard, Esq., Uckfield, and W. Mercer, Esq., Hunton. In twelve varieties, the Rev. T. M. Wetherall, of Newnham, Gloucestershire, was first, C. M. Worthington, Esq., the Rev. S. R. Hole, and C. G. Puller, Esq., of Yongsbury.

Amateurs not employing a gardener.—In twenty-four varieties, Mr. Mallett, of Nottingham, was first; Mr. Fryer, of Challern, was second; and Mr. Walker, of Oxford, and Mr. Laxton, of Stamford, followed. In twelve varieties, Mr. Fryer, Mr. Morris, of Camton, Mr. Mallett, and Mr. Laxton.

Many new roses were exhibited. Among them I noticed François Arago, a splendid rose, very like E. Appert, Madame Standish, and a noisette, Celine Forestier. Messrs. Fraser also exhibited some splendid novelties. Mr. Cant showed a magnificent stand of Cloth of Gold. DEVONIENSIS.

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PLAIN TALK ABOUT COMMON VEGETABLES.

No. I.—Cabbages.

The culture of vegetables is one sadly neglected among gardeners, and I think that a little plain talk will be acceptable to a large number of your readers. Few persons there are who do not enjoy a good cabbage.

Seed for the principal crop should be sown at the latter end of July or the beginning of August, and a succession may be sown in September, and also early in the following year, which will keep up a supply the year round. For sowing the seed, a well-manured bed should be prepared, the seed sown regularly, raked, and firmly pressed in. The plants, when of a sufficient size, may be pricked out in another bed. By taking the strongest out, it not only benefits the plants removed, but also allows the other seedlings to expand their leaves. Some at once plant from the seed-bed into the quarters, but I think the extra labour of transplanting is attended with advantages. They may be set out in October. The quality of the soil affects the crop considerably; all cabbage delight in good rich soil. In light land, the crop is earlier, and sweeter in flavour; while, in rich land, the crop is heavier and rather later. In most ground, however, if manured and properly hoed and earthed up, a good crop may be anticipated. The plants are generally placed eighteen inches asunder, and two feet between the rows, although, in the smaller varieties, half that distance will suffice. The planting is best done as the digging of the quarters proceeds, although some prefer digging the whole over, and then planting with a trowel. The plants should be inserted in the soil up to the first leaves. A maggot or fly frequently causes a failure by the plant clubbing. Autumn-planted cabbages are generally fit for use in the following May. A succession of the smaller plants, planted at various times from the seed-bed, will enable you to cut till winter arrives.

Red cabbages are cultivated and sown in nearly the same way, sow in August and in March. They must be planted further apart. Savoys are extremely hardy and useful, being, if possible, improved by frost. The seed should be sown about the middle of April, pricked out, and about the end of July be transplanted in quarters of rich ground, well trenched about the same distance as other cabbages. Broccoli is also a hardy winter vegetable, and may be cultivated in precisely the same way. Brussels sprouts are another useful winter esculent. The head is small, but the abundance of sweet little heads springing all down the stem render it a favourite with every one.

"Vegetarian."

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NEW AZALEAS.

(*From "Gossip for the Garden."*)

THE following new varieties have made their appearance this season at the London meetings:—

Clapham Beauty.—From Mr. Todman, gardener to R. Hudson, Esq., Clapham. A delicate rose-colour, well formed, and of medium size, but not spotted. Though individually handsome, it is not superior to the finer kinds of the same colour already in cultivation.

Clapham Hero.—From Mr. Todman. A light purplish rose, of tolerably good form, but without conspicuous spotting.

Constance.—From Mr. Standish, of Bagshot. A variety raised between Gledstanesi and vittata rosea; flowers rather small, white, very constantly streaked and flecked with light red. A very useful free-flowering decorative sort.

Dash.—From Mr. Kinghorn, of Richmond. A narrow petaled striped variety, remarkable only for the long endurance of its flowers.

Kinghorni.—From Mr. Kinghorn. A fine rose of remarkable substance, the flowers well formed, average sized, and smooth in texture, very richly spotted on the upper segments. It is a variety of first-rate excellence in its class.

Leviathan.—From Messrs. Ivery and Son, Dorking. A large semi-double white, of great purity; the flowers, though showy, are rather loose, with wavy edges, but it may be considered as a step in advance towards the acquisition of a large-flowered, double, pure white variety.

Mars.—From Mr. Kinghorn. A very fine variety both as regards form and substance, resembling in quality and in colour the fine variety known as perfecta elegans, but several shades brighter in colour. Commended by the Floral Committee of the Horticultural Society.

President.—From Mr. Kinghorn. The flowers of this variety are remarkably large and smooth, of excellent form, a fine deep red salmon, with the upper segments finely spotted with deep red. It may be considered as a much improved Duke of Devonshire. First-class certificate from the Floral Committee of the Horticultural Society.

Prince of Orange.—From Mr. Todman. A free blooming and pretty orange-red variety, corresponding in colour with Gem, but without the contrast afforded by the spotting on the upper segment which forms so striking a feature in that variety. Certificate at Royal Botanic Society.

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Sir J. Outram.—From Mr. Turner. The flowers are remarkable for their fine colour, a rich bright carmine-red, thickly spotted on the upper segment. A promising variety.

Tricolor.—From Messrs. Ivery and Son, Dorking. A large showy variety with tolerably well-formed flowers, white with broad flakes, and narrower streaks and flakes of bright carmine and other markings of faint blush. A good decorative sort, and probably constant.

THE VEGETABLE GARDEN—AUGUST.

Broccoli.—Finish planting the late varieties as early as possible. Set them out at least thirty inches each way; hoe those planted last month to destroy weeds. There is no occasion to earth them up, except in very light land.

Cabbages.—Plant all vacant ground as directed last month. Decrease the distance from plant to plant as the season advances.

Cabbage Seeds.—Sow any time during the first two weeks. Early Emperor is an excellent variety for the purpose, and comes in for use very early in the spring.

Lettuces.—Sow second week on a south border; it is requisite to sow thin. The plants will grow stronger, and stand the winter much better when set out.

Celery.—Weed, move the ground round the plants with a small weeding-fork; stirring in a little guano, will excite them on; earth them up when they are three parts grown. Many persons mould them up at a very early stage of their growth. It is a practice not at all to be commended, as it prevents the leaf-stalk attaining its full growth. Earthing-up should be effected at three different times.

Spinach.—Sow the prickled sort from the 12th to the 30th of this month. It should be sown in drills an inch deep; the rows to be twelve inches wide. It grows best on light deep land, and is less liable to canker.

Brussels Sprouts.—Sow seeds about the middle of the month, and transplant when they are four or five inches high. They should be set out thirty inches from row to row, and twenty-four inches between the plants. The practice of sowing seeds of Brussels sprouts in spring is questionable. They have not time to attain a fine growth.

Turnips.—Finish sowing the first week. They should be sown on a warm border.

Cauliflowers.—Sow seeds about the third week, on land rather poor. Let it be on a south border; they will stand the winter, if

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the land is not too stiff, and wet, without protection; but if the ground is of a wet, clayey nature, it is better to sow them in a frame on prepared soil. The sowing in this instance should be in the last week of the month.

Onions.—A sowing may be made about the middle of the month. Sow thickly; land that has been manured for a previous crop would be suitable. White Spanish, Reading, or Deptford, are good varieties.

Endive.—If not transplanted last month, should not be delayed beyond the first week of this. Tie up former plantings to blanch, choosing a dry day for the purpose.

Red Cabbages for Pickling.—Sow seeds the third week of this month.

General Directions.—Hoe and thin out all small crops. Work the soil well between transplanted crops. Get all the winter articles in as soon as the ground becomes vacant, that they may attain strength before the chilly rains and nights come.

Market Gardens, St. Lawrence, Jersey. JAMES LEVESQUE.

FRUIT.—At the Horticultural Society's Fruit Committee's meetings, on the 10th of July, strawberries formed the leading feature. Mr. Turner obtained the first prize with Filbert Pine Elton Pine, Sir Charles Napier, Myatt's Eliza, Rivers' Eliza, Admiral Dundas, Black Prince, Sir Harry, Carolina, Prince of Wales. Amongst novelties there was Wizard of the North, let out by Mr. Robertson. Some plants shown with unripe fruit promise well. The fruit shown, however, was not overlarge, but of approved flavour. Oscar, exhibited by Mr. Turner, and raised at Belvoir, realized all we have before said of it. May Queen, Blackbird, a new variety raised by Mr. Ingram, and Prince Arthur, raised by the same gentleman, obtained prizes.

OPINIONS OF FLOWERS.

W. GLYNN.—Neither of your seedling pansies is worth saving another year, but don't be disheartened, try again.

W. B.—The box containing two blooms of your seedling pink has arrived quite safe and in nice order; and I have much pleasure in recommending it as a first class flower, although not exactly perfection. The petal is not quite so round as that of Mrs. Norman (the style I like), but in every other property it is equal to her ladyship; it carries a good solid lacing of a brilliant dark purple on a pure clear white ground, and, if a regular comer, will make another addition to this already numerous class of flowers.—J. HEPWORTH.

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C. T., Blaydon Burn.—The seedling pansies you forwarded are among the best we have seen this season. Captain Cowen is a fine rich crimson purple self; it has a fine eye and is of good shape; W. R. Gladstone, although having a good ground and firm decided belting, is not sufficiently decided in the shield, otherwise it would make a useful flower; Charles Dickens is a good self, but not superior, or distinct from many varieties we have seen; Sam Slick, a useful deep self, although not better than Dr. Fleming; Lord Bruham, good yellow ground, with dense eye and broad belting of bronzy crimson, a good flower; Stella, a good useful white, which is much wanted.

J. A., Sandbach.—Your pansies are a good strain, and have three or four fine flowers among them; 1, 2, 4, 6, 8, 9, 10, 11, 13, 14, and 17, are among the best of them, and should be grown again.

G. S., Wolverhampton.—The pansy, Miss Bates, is a nice fresh flower, but we should like to see a good black eye, instead of its running, as it does now, into the ground colour; Queen of Purples is a nice self, but not sufficiently dissimilar. Let us see them both again.

Z., Berwickshire.—Your seedling pansy is a good self variety.

T. P., Guernsey.—Your geranium is a nice bright flower, and distinct white eye. It appears of good shape, and although not a large flower, would make an attractive specimen.

W. P., Bury St. Edmunds.—Your seedling geranium is not so good as would lead us to hope better of it another year.

S. D., Wolverhampton.—Your seedling cineraria was so withered that it was impossible to pass a fair opinion on it; but we could see just sufficient of it to believe that it is no advance upon the existing kinds, although it might make an attractive specimen.

G. W., Guernsey.—Every petal had fallen coming through the post, rendering an opinion of the geranium you forwarded impossible.—JOHN DOBSON.

W. Kaye, Shiphaugh, near Stirling.—Your seedling pink, Queen Victoria, arrived quite safe, but take it as a whole, it is no beat upon what are already out. The petal is pretty stout, and its ground is a pure white, and laces well with bright red, without much white fringe on the edge; but the petals are too narrow, and the pod too short, which is burst in the bloom sent. P.S. See Mrs. Norman as a criterion.—J. H PWORTH.

WORK TO BE DONE—AUGUST.

Auriculas.—Repot, at all events, part of the stock. The plant should be carefully shaken out; the roots thoroughly examined, and any diseased part carefully removed, and then potted up in a mixture of cow-dung, two years' old loam, and light soil, about equal portions. Pots generally used now are six inches. Drainage in plenty, using a little moss, to prevent its being choked up. Half fill with soil, and place in the plant, filling up and regulating its height according to your plant. Give a little water, which may be increased according to the weather.

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Carnations and Picotees.—Layering must not be delayed. It is not, however, necessary to repeat my instructions, which will be found on page 17 of the present volume.

Chrysanthemums.—Tie up all border varieties firmly, with two strong stakes, at least eighteen inches or two feet higher than the plants are at present; they make rapid growth during September and October, and will be sure to be then considerably higher than the top of the stakes. Supply bountifully with water in August, or they are apt to get the mildew. Look sharply after earwigs, or they will eat the centre out. A sprinkling of bitter aloes, diluted with water, just at dusk, will be a great preventative, as they usually feed in the dark. Look well to specimen plants, and see they do not throw up suckers, and take off all laterals; leave three branches when the crown divides, and take off the side-shoots from them, till the flower-bud shows, which will be the beginning of September. Be particular in making the three top-shoots firm to a stake, or they will snap at the joint, when there is much wind and the foliage is loaded with wet. Attend to the watering and mulching, as before directed, if the plants are in the border. Keep pegging down your pompones till the middle of August. Now is a good time to put a few out in the beds by themselves, if you can spare the room; they will make a grand display in autumn, if pegged down, like verbenas. They are easily covered, if frost comes in early, when kept short.

Cinerarias.—Little advice is necessary except this, stock must be increased and well watched, as the green and black-fly will soon destroy them, if allowed. Keep the plants clean and in a cool part of the garden. Any plants struck early may be repotted into some good soil, and brought on gradually. Repot seedlings. Seed may still be sown.—JOHN DOBSON, *Woodlands Nursery, Islesworth.*

Dahlias.—The shoots must be fastened to the stakes, cutting out any which cannot be conveniently used. Should you desire quality, it is better to take off anything growing past the bud likely to produce a bad flower. All buds with ill-formed eyes or other defect should not be allowed to bloom; remove these, and also all decaying flowers.

Fuchsias.—Specimen plants will now be in their beauty. Frequent waterings and careful shading, with the entire exclusion of bees from the house, will prolong the beauty. Those who wish to have large plants should put in cuttings at once, and grow them gradually on; there is nothing easier grown, and there is nothing more beautiful. The cuttings will strike best in a gentle heat.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Hollyhocks.—Should exhibiting be your object, at once shorten

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your spike to the desired length. Carefully shade and attend to your flowers. The date of exhibition should be carefully borne in mind. If, however, you only wish that your bed should be pleasing and effective, top all the plants immediately they attain five feet six inches or six feet. Amateurs often overlook propagation, which, at this time, may be easily effected by side-shoots; every eye will grow. Watering well with liquid manure and plain water, and tying must be seen to.

Pansies.—This has been a most favourable season for the pansy-grower; there has been plenty of fine blooms and plenty of stock. At the present time we have as fine flowers on our plants as we have had the whole season. Increase the cuttings according to the stock required; do not put off making stock till too late, as late cuttings often stand all water without showing signs of roots. Make up beds towards the middle of the month if not hot, and select out such as are intended to be grown in pots; and here I would suggest the practicability of the managers of our London shows offering prizes for these things. There was a time when certain growers could compete, that three pounds were offered for the first prize of twelve, but the weather caused such a falling off in the stock, that pansies became almost extinct about this neighbourhood, and the prizes became extinct also for novelty, popularity, and general effect. The pansy has its unlimited number of admirers at our exhibitions, and the taste for them rather increases than abates. Why, then, should not the growers of these plants be encouraged by offering prizes? We shall take an opportunity of suggesting the thing in the proper quarter, and hope that our suggestions may be carried out. Seed may be sown, then make nice showy buds, and often a few flowers are good enough to be put in the stand, if hard run for named sorts. I hope to have more to notice with regard to this plant next month.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Pelargoniums.—Resuming my notes on the seedling pelargoniums exhibited at the Regent's Park show on the 20th June. As I anticipated, seedlings were shown in very large numbers, and with much more competition then previously. The most conspicuous, however, among them were as follows:—E. Foster, Esq., contributed Bijou, a very novel and distinct flower, the colouring of which it is difficult to describe; it may be called a lilac, or violet purple; it is a good shaped flower, appears a good bloomer, and, as a specimen, will have a striking effect. Rosa Bonheur, from the same raiser; we could not see anything in it better than in Symmetry, and certainly not so good as Lord Clyde. Garibaldi (Foster), a nice rosy crimson flower. Psyche (Foster), a very large flower, of good shape, and very stiff; the lower petals are

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peach, with deep top petals. E. Beck, Esq., contributed Victor, and to which a certificate was awarded. It is a very nice, clean, bright crimson flower. Transcendant (Beck), a very deep-painted flower, and will be very effective. Mulberry (Beck), very rich dark, of good shape and substance, large. Gem of Roses (Beck), certainly not in such good condition as at the previous show. Prometheus (Beck), very light under canvas. From our own nursery was contributed Volunteer, to which a first-class certificate was awarded. It is a large, bold, deep crimson, of extraordinary substance, and having a deep maroon blotch on the upper petals, with a fiery margin; it is a strong grower and free bloomer. General Garibaldi also received a first-class certificate, is a large dark flower, and will make a splendid show flower. Queen of England, a most beautiful white, with lively cherry blotch, was also greatly admired, and will prove a great improvement on many of the existing white kinds. Fairy Queen is a very large white flower, with a crimson maroon blotch, and a nice rose margin of white on the top petals. This is very superior to any of the white flowers now grown for exhibition, and, as a saleable plant for the trade, will be invaluable. Lady of the Lake is, perhaps, one of the most distinct and new that were exhibited; it is a large, bold, flat flower; mottled or shaded rosy salmon, with clean white eye, with large clouded blotch of rosy maroon, which makes it very effective. We exhibited about a dozen other new ones, but these we hope to again exhibit next season. G. W. Hoyle, Esq., of Reading, again contributed Rosa Bonheur, which received a first-class certificate. We cannot alter the opinion we expressed last month, that this flower is not distinct enough, or superior to the same gentleman's Prince of Wales, in which opinion we were not alone. Beauty of Reading also received a first-class certificate, but it resembles the former variety too much. Norma (Hoyle), a very nice clean flower. Alpha (Hoyle), a very round flower. Generalissimo (Hoyle), too like Wonderful. Mr. Turner showed Modesty (Beck), very free flowering white, but we could see nothing new in it. Messrs. Rollison contributed many spotted kinds, among the best of them were King of the Belgians, and which received a certificate; it is a very attractive dark variety, in the style of Napoleon the Third. Prince Consort is also a distinct and good dark spotted. Dr. Hooker, a large deep Mr. Beck-flower. Princess Helena, light, with distinct cherry spots, was effective. These were all that were deserving of special notice, although many more of them we expect to see next season. Next month I hope to continue the list, noticing those shown on the 4th of this month. The operations connected with growing plants are this month varied. The foundation for another season

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must now be laid. If the plants have broken well, little or no trouble will be experienced in forming handsome specimens; if they break irregular, the opportunity must be watched to pinch out the tops of the forwardest shoots, and thus make up for the deficiency. Should any plants not be already cut down, lose no time in doing so. Those cut down last month will have broken sufficiently at the eyes to be shaken out, disrooted, and repotted; in disrooting, it must not be understood that the whole of the roots are to be cut off, but any straggling ones that may appear in the way. Repot them in some nice open soil, with two or three inches of broken pots at the bottom for drainage. Pot them back into six-inch pots. Keep them close in a dry frame or house till they get established, carefully supplying them with water, and just damping them overhead once or twice a-week with a fine rose watering-pot, if the weather is dry. As soon as the plants have recovered from the shift, air may be abundantly given, night and day. If the day is fine, the lights may be drawn off, but be careful that they are put on at night. Green-fly will be very busy as soon as there is a little bit of growth, fumigate them with tobacco paper occasionally. Cuttings must be attended to, and only very moderately supplied with water.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Roses.—Those in pots should be kept moving, watering them according to the season and their requirements. Cuttings will strike readily. The rose-garden is now in its meridian. All weak shoots should be removed, together with decayed bloom. Budding should be attended to, and I would direct the reader to admirable lessons given in the April number, which, together with the illustrations, cannot but be understood.

NOTES OF THE MONTH.

PINKS.—Although in some cases and situations propagation commenced in June, still this is the general month for striking a new stock, which should be done as early as possible, according to the directions given. Carefully look after all seed which you may have crossed, covering it over with a hand-glass. A bed for the reception of the newly-struck pipings should be prepared towards the latter end of the month. Water liberally. Pipings which have struck may now be planted out into store-beds. Carefully collect seed as it ripens.

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THE ROSES AND THE NATIONAL.

The great interest excited in this comparatively new-born exhibition, together with several letters which have reached me through the medium of our respected editor, induce me again to take up pen and ink to give some notes on the recent festival, and, lest any of your readers should think these notes superficial, I would here insert a letter received this morning :—

"Mr. Editor,—As an old subscriber to the 'Midland Florist,' I beg to remark upon the very meagre account given of the National Rose Show. Indeed, for what purpose it was inserted at all is to me a mystery, except to favour the exhibitors by setting forth their names, and excluding the information required by the majority of your readers. Depend on it, few of your readers care who are the winners; it is the varieties that they want to know about, and on this point we are informed that there were a few new things. Two or three names are given, while others, said also to be excellent, are, for some reason, withheld, and also that Mr. Favourite showed a fine pan of the Cloth of Gold. Now, I think it will be admitted that the National Rose Show is an event of the year, and, as such, is entitled to the same consideration as its sister, the National Tulip Show, of which you gave a very elaborate report. Why not enforce in all cases the rule you apply to tulips—insert no report without the names of the winning flowers are given?

"Yours, respectfully,

"Malmaison."

Before commencing, I would make some few remarks. If "Malmaison" will kindly refer to the report, which I would confess to being exceedingly meagre, he will find that I assign as a reason for its being scanty that I have already in preparation "Notes on Roses." Perhaps our worthy correspondent is not aware that all the papers intended for publication in the current number are in the hands of the editor on the 19th instant, so that I had only a week for its preparation, and, being a man earning his bread by the sweat of his brow, it is only during a few leisure hours that I could possibly devote to the subject. I quite agree that the names of the winners are but of little interest; but it would be an impossibility to give the name of every rose. Even those taking prizes are about twelve hundred, and would, therefore, fill not less than fourteen or fifteen pages. I have endea-

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voured, with the help of other notes, to give a list of the principal varieties in the first stands, and I hope, in doing this, I shall not bring myself under the imputation of favouritism, an insinuation thrown out by our friend, but which I would totally and flatly deny, as I never spoke to the exhibitor of the Cloth of Gold. I would, however, leave this with lookers-on, who see more than players, and who, I believe, will agree with me in declaring them to be a "magnificent stand of Cloth of Gold."

The following report, somewhat slightly condensed, from the *Chronicle*, will give the names of the varieties, the condensation consisting merely of the names of the winners, which, if desired, may readily be referred to at page 257:—

"Mr. Mitchell sent beautiful examples of—

"HYBRID PERPETUALS.—Abbe Feytal, deep rose, fine form; Alexandrine Bachmeteff, bright red, large and fine; Anathalie Chautrier, pale rose, very beautiful; Altesse Imperiale, crimson shaded and beautifully cupped; Armide, rosy salmon, distinct and good; Anna Alexieff, bright rose, large and beautiful; Ardoisee de Lyon, shaded large crimson; Berceau Imperial, delicate pink, large and full; Baronne Larray, rich pink, large and double; Baronne Prevost, bright rose, very large; Belle de Bourg-la-Reine, a new and promising kind; Caroline de Sansal, large pale flesh; Cardinal Patrizzi, dark and very beautiful; Col. de Rougemont, very large, but coarse; Comte de Nanteuil, pale rose; Comtesse Cecile de Chabrillan, pink, beautifully cupped, a really fine rose; Comtesse d'Orleans, blush, large and full; Docteur Ruschpler, rosy pink; Duc d'Ossuna, bright rosy carmine; Duchess of Norfolk, by no means a bad rose; Duchess of Sutherland, Duchesse d'Orleans, fine lavender blush; Duchesse de Polignac, rosy lilac, very large; Ernest Bergemann, pale rose, large and beautiful; Eveque de Nimes, bright purplish red, compact, and very beautiful; Geant des Batailles; General Jacqueminot, in very fine condition; General Pelissier, lilac rose, cupped, and distinct; Gustave Coraux, shaded crimson; Imperatrice des Francais, pale flesh; Jacques Lafitte, shaded crimson; Jules Margottin, large and full, a magnificent rose; Lord Raglan, glowing scarlet; La Reine; Leon des Combats, dark crimson, beautiful; Louis Chais, bright red, shaded with crimson, but not in first-rate condition; Louise Odier, fine bright rose; l'Enfant du Mont Carmel, shaded crimson; Mignard, shaded rose, very beautiful; Madame Rivers, blush, a splendid variety; Madame Ducher, rosy pink, very compact; Madame Domage, very beautiful, glossy rose; Madame Place, bright pink; Madame Vidot, a fine variety, very like M. Rivers; Madame Masson, deep crimson; Madame Schmidt, rosy pink, large and beautiful; Madame Hector Jacquin, deep rose; Madame Knorr, rosy pink, a fine variety; Madame Van Houtte, beautiful rosy pink; Mathurin Regnier, lilac rose, fine in form; Monsieur de Montigny, rosy carmine; Noemi, glossy pink; Nouvel Etendard du grand Homme, a salmon-coloured promising kind; Paul Dupuy; Pauline de Lansezeur, crimson shaded with violet, a fine variety; Prince Leon, cherry red, fine form; Queen Victoria, white shaded with peach, very beautiful; Stephanie Beauharnais, delicate flesh; Souvenir de la Reine d'Angleterre, bright rose; Souvenir de Leveson Gower, dark red, large and full; Thomas Rivers, bright rose; Triomphe de l'Exposition, beautiful crimson; Tower Malakhoff, dark crimson; William Griffith, bright lilac rose, fine in form; William Jesse.

"BOURBONS.—Adelaide Bougere, dark velvety crimson; Dupetit Thouars,

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beautiful bright crimson, still a useful rose; La Quintinie, bright shaded crimson; Reveil, rich velvety crimson; Souvenir de Malmaison, blush, a magnificent variety.

"NOISETTES.—Lamarque, white; Narcisse, primrose yellow, very beautiful; Triomphe de Rennes, yellow.

"TEA-SCENTED CHINAS.—Auguste Vacher, yellow shaded with copper colour; Amabilis, rosy blush, large; Bougere, bronze; Comte de Paris, a fine old variety; Devonienais; Gloire de Dijon, yellow shaded with salmon, magnificent; Goubalt, rosy buff, large and fine; Duc de Magenta, a new kind, which we hope to see again; Josephine Malton, creamy white, large; Louise de Savoie, sulphur; Madame Lartay, yellow shaded with salmon; Niphetos, pale lemon, very large and beautiful; Souvenir d'un Ami, salmon and rose shaded, large and fine; Souvenir d'Elise, a splendid rose; Silene, rosy salmon; Vicomtesse Decazes, bright yellow.

"MOSS.—Baron de Wassenaer, rose; Crested, rose, with crested buds; Gloire des Mousseuses, pale rose, large.

"PROVINS.—White, still a good old rose.

"HYBRID CHINAS.—Chenedole, vivid crimson, large and fine; Charles Lawson, bright rose, large and full; Paul Ricaut, bright crimson, fine in form.

"FRENCH.—Boule de Nanteuil, violet purple, a good old rose; Duchess of Buccleuch, dark rose shaded with blush; Latour d'Auvergne, shaded rosy crimson; and Napoleon, brilliant crimson.

"Among other collections of 100 trusses were fine blooms of Louis Odier, Madame Boll, rosy pink, and fine in form; Transon Goubalt, Mathurin Regnier, La Ville de Bruxelles, Moss Lanei, Crested Moss, Latour d'Auvergne, large and showy; Madame de Cambaceres, Prince Regent, General Jacqueminot, Madame Knorr, one of the best autumn roses we possess; Duchess of Orleans, Alexandrine Bachmeteff, Madame Vidot, La Ville de St. Denis, large and fine; White Bath Moss, Duchess of Norfolk, Anna Alexieff, Eveque de Nimes, Jules Margottin, William Griffiths, Madame Domage, large, but loose; Cardinal Patrizzi, a very dark kind; General Castellane, Lord Raglan, Prince Leon, Coupe d'Hebe, Souvenir de Malmaison, Duke of Cambridge, Chenedole, Pauline Lansezeur, a fine lilac variety; Charles Lawson, Comtesse Chabrillan, a compact fine rose, beautiful in the bud; Princess Royal, a good moss; Col. de Rougemont, in the way of Baronne Prevost, but coarser; Gloire de Dijon, bronzy yellow, rich and good; Common Moss, Robin Hood, still a good rose; Madame Willermoz, in beautiful condition; Louis Chaix, not near so fine as we have seen it; Triomphe de Beaux Arts, a very dark velvety rose; General Simpson, Acidalie, an old, but fine variety; Prince Imperial, large, but coarse; Geant des Batailles, Louis Peyronny, the Yellow Vicomtesse Decazes, Alice Leroy, Souvenir d'Elise, Paul Perras, Baronne Prevost, Pauline Labonte, salmon; Laura Raymond, Niphetos, large and fine; and Auguste Vacher, fine yellow.

"In the class of fifty varieties we remarked beautiful blooms of Anna de Diesbach, Bacchus, glowing crimson, scarlet; M. Hector Jacquin, fine in the bud state; Madame Rivers, a charming variety; Charles Lawson, a fine large useful rose; and General Castellane. The last is, perhaps, one of the most fragrant of roses.

"Collections of twenty-four varieties (Mr. Keynes) were—Juno, Madame Phelip, Boule de Nanteuil, Charles Lawson, Comtesse de Chabrillan, Duchesse d'Orleans, Eveque de Nimes, General Jacqueminot, Geant des Batailles, Gloire de Vitry, Lord Raglan, La Ville de St. Denis, Madame Knorr, Madame Rivers, Madame Vidot, Mathurin Regnier, Pauline Lansezeur, Prince Leon, Stephanie Beauharnais, William Griffith, Leon des Combats, Souvenir de Malmaison,

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Enfant du Mont Carmel. In the other stands—General Jacqueminot, the most showy of roses, and one which appeared in every stand; Gloire de Vitry, a bright rosy kind; Lady Stuart, a variety in the way of Madame Rivers; La Reine, Duchess of Orleans, large, pale lilac, and one of the best late roses we possess; Lord Raglan, one of the most brilliant of comparatively recent introductions; Comte de Nanteuil, Caroline de Sansal, a fine variety, but this year small in size; Narcisse, Sulphur, one of the very hardiest of tea roses; and Souvenir de Malmaison, the last very large and fine.

"Of twenty-four varieties shown by exhibitors keeping a gardener, Mr. Hedge exhibited Charles Lawson; Paul's Queen Victoria, a fine large light kind; Shakespeare, Madame Bravy, Gloire de Vitry, Caroline de Sansal, Queen, Madame Knorr, M. Cambaceres, Gloire de Dijon, Alexandrine Bachmeteff, Cloth of Gold, Souvenir d'un Ami, Paul Ricaut, Louise Magnan, Adele Prevost, Auguste Mie, Aurora Devoniensis, Lord Raglan, William Griffith, and Niphetos.

"Of twelve varieties shown by amateurs keeping gardeners, we noticed some very fine blooms of General Jacqueminot; Gloire de Dijon; Anna Alexieff, a very good variety; Smith's Yellow Noisette, a charming variety when caught in good condition, as this was; Duke of Cambridge, bright rose; Jules Margottin, which is universally admitted to be one of the very best of its class; and Leon des Combats, also a good rose. We also observed Emperor Napoleon, a very dark kind; but it was small, thin, and bad in shape. Empereur de Maroc also belongs to the same class, but is perhaps a trifle better in form.

"In the class for amateurs not keeping a gardener, the most conspicuous varieties were—Lord Raglan, General Jacqueminot, Gloire de Dijon, Safranot, Souvenir de Malmaison; Souvenir de Leveson Gower, a beautiful rose; and one or two other well-known sorts. Caroline de Sansal, Lord Raglan, Baronne Prevost, Vandal; M. Vidot, one of the best of the light varieties; Emperor Napoleon, La Reine, General Pelissier, Julie d'Etanges; Boule de Nanteuil, still a good old rose; and Prince Regent. In these and other collections, we observed very fine trusses of the following varieties, viz.:—*Hybrid perpetuals:* Madame Vidot, Duchess of Norfolk, Madame Heraud, Madame Hector, Jacquin, Victor Trouillard, Madame Masson, Duchesse d'Orleans, Comte de Nanteuil, Cardinal Patrizzi, Madame Place, Lady Stuart, Gloire de Vitry, Madame Knorr, General Simpson, General Castellane, Gloire de Partheny, Panachee d'Orleans, Madame de Cambaceres, Prince Leon, Geant des Batailles, Mathurin Regnier, Lord Raglan, Caroline de Sansal, William Griffiths, Noemi, Jules Margottin, Madame Rivers, Triomphe de l'Exposition, Louis Peyronny, Auguste Mie, Baronne Prevost, Leon des Combats, General Pelissier, General Jacqueminot, and Joan of Arc. *Gallica:* Transon Goubault, Cynthie, Boule de Nanteuil, Colonel Coombes, Latour d'Auvergne, Prince Regent, Dido, Ohl, Kean. *Bourbon:* Acidalie, Souvenir de Malmaison, Coupe d'Hebe. *Hybrid China:* Brennus, Chenedole, Victor Hugo, Madeleine, Paul Perras, Madame Rameau. *Tea:* Souvenir d'un Ami, Narcisse, Gloire de Dijon, Madame Willermoz, Bougere, Devoniensis.

"The following list contains some of the very finest varieties selected from the whole exhibition:—*Blush:* Madame Vidot, Madame Rivers, Duchess of Orleans, Auguste Mie (deep blush), Caroline de Sansal, and Mathurin Regnier. *Scarlet, or dark crimson:* Lord Raglan, General Jacqueminot, Leon des Combats, General Castellane, Prince Leon, Paul Ricaut, and Sir J. Franklin. *Rose:* Colonel Rougemont, Madame Hector Jacquin, Jules Margottin, William Griffith, Gloire de Vitry, Prince Imperial (coarse, but showy), Coup d'Hebe, and Paul Perras. *Yellows:* Cloth of Gold (some extremely fine blooms of

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a deficiency; the best are—Dr. Henon, Princess Clementine, the old White Provins, Louise Magnan, and Beaute de Melan. *Stripes* were not good; among them we noticed Panachee d'Orleans and Œillet Parfait. Among moss roses we have little to recommend beyond the usual well-known kinds. There were, however, some good blooms of the White Bath."

The following remarks are from notes taken by myself:—Eveque de Nimes (H. P.), said to be a seedling from Geant des Batailles, and raised at Lyons, was shown good in numerous stands; seems to be a very useful, indeed one of the most useful of the high-coloured roses. Eugene Appert (H. P.), a fine glowing crimson, exceedingly bright, and of a strong growth. Anna Alexieff (H. P.), a comparatively new favourite, is exceedingly pretty, a free bloomer, and bears a fullish bloom. It is of a medium colour. Comtesse de Chabrillan, another new H. P., is a decided acquisition. It is of exquisite shape, pink, of a fine colour, good substance of petal, and far above the average form. In this it resembles much Mathurin Regnier. Oriflamme de St. Louise is rather coarse, and is decidedly from the "General." The colour is unsurpassed. Empereur de Maroc is another comparatively new rose. Its colour is a deep crimsony maroon, and some of the blooms exhibited were in excellent order, while one in particular lacked stoutness as well as fulness of petal. Other new varieties which pleased me were Belle de Bourg la Reine (H. P.), a French variety of good favour, large, and seems vigorous; Madame Boll or Ball (H. P.), colour a deep but bright rose, above the average size, and full petalled; Mademoiselle Bonnaire, a pretty white variety, good size and form, and well filled with petals; Triomphe de Lyon, dullish red, much in style of Prince Leon, and I question if it can be called any improvement on that variety; Anna de Diesbach, is of a rose colour, slightly shaded, the bloom is well cupped, of good size and petal, and in all respects a lovely thing; Altesse Imperiale, good dark violet, its petals are too few for it to make a good rose, still it is pleasing; Duc de Magenta, another French variety, bright carnation or flesh colour; it is of good size and form, and belongs to the tea tribe. In old favourites the following fully maintained their character:—Madame Vidot (H. P.), pale flesh; Gloire de Dijon (T.), buff, with orange centre; William Griffith, glossy pink, changing to a light rose; Souvenir de la Malmaison (H. P.), clear flesh, with blush centre; Jules Margottin, brilliant glossy pink; General Jacqueminot, brilliant crimson, too well known to need comment; Geant des Batailles; Baronne Prevost (H. P.), brilliant rose; Charles Lawson (H. B.), bright rose, slightly shaded; Bouille de Nantueil (F.), crimson dark; Chenedole (H. C.), bright crimson; Coup de Hebe, pale rose; Caroline de Sansal (H. P.), pale pink; Duchess of Sutherland (H. P.), bright pink; Lord Raglan (H. P.), deep crimson; Souvenir d'

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la Reine de Angleterre (H. P.), bright pink; Solfaterre (N.), sulphur; Mrs. Rivers (H. P.), flesh; Devoniensis (T.), blush; Alphonse Karr, rosy pink; Cloth of Gold (N.) yellow.

Isabella Gray was not to be seen, although we differ from some of our contemporaries in thinking it a mere puff. Isabella Gray has come well, and we have been greatly delighted with certain blooms. Joan Hardy was also absent.

Hoping these few remarks may be received in the same spirit as they are offered, I am yours, etc. DEVONIENSIS.

[P.S.—I cannot conclude without awarding my heartfelt thanks to the founder of this Feast of Roses, the Rev. S. R. Hole, and to the executives of the Crystal Palace, who carried out the whole meeting in a manner worthy of imitation.]

GATHERINGS FROM AUSTRALIA.

WE have still much to learn of the botany and natural history of the fifth quarter of our globe. Modern travellers, our rail and steam connection, together with the press, impart knowledge, as it were, daily. Among others, Dr. Bennett, well known for his previous jottings on New South Wales, has furnished us with a series of gatherings from the New World. The book has given us much pleasure, and we have selected, in the course of a mere glance, the following paragraphs:—

LUMINOUS PLANTS.—There is one, a species of the genus Agaricus, which has been observed to be vividly luminous. It is very common in the Australian woods in the vicinity of Sydney, about the localities of the South Head Road, and among the scrubs and forests at the approach to the headlands of Botany Bay, and emits a light sufficiently powerful to enable the time on a watch to be seen by it. The effect produced by it upon the traveller when on a dark night he comes suddenly upon it, glowing in the woods, is startling; for, to a person unacquainted with this phenomenon of the vegetable kingdom, the pale, livid, and deadly light emanating from it, conveys to him an impression of something supernatural, and often causes no little degree of terror in weak minds, or in those willing to believe in supernatural agencies. I have frequently gathered this fungus, and on placing it in a dark room, found that it has retained the luminous power for two successive nights, the phosphorescence becoming fainter on the second, disappears entirely on the third night. The fungus is of a white colour above, and of a delicate yellow, with white beneath, varying in size from six to ten inches across its greatest breadth. The whole of the plant shines with a pale, livid, and greenish phosphorescent glow.

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GIGANTIC NETTLES.—The lofty and noble gigantic stinging-nettle of the colonists (Urtica gigas), found abundantly in the district of Illawarra, New South Wales, and other parts of the colony, is a formidable tree. A specimen, seen by Sir W. M'Arthur, still in full vigour, rises from its base by a series of buttresses of singularly regular outline, gradually tapering without a branch to the height of 120 to 140 feet; the trunk then divides itself into a regularly-formed wide-spreading head, which excites admiration by its extraordiuary size. But the ordinary elevation of this tree is from 25 to 50 feet, with a circumference of 12 to 20 feet. The leaves, when young and in vigorous growth, attain a breadth of from 12 to 15 inches, and are of a beautiful dark green colour. As may be expected, the poisonous fluid secreted from the foliage is very powerful, particularly in the younger leaves, and their sting is exceedingly virulent, producing great suffering, and not unattended by danger. A gentleman residing near London had a very young specimen of this tree sent him, without any label attached to it, or history given. He complained to me of its exceedingly annoying and stinging properties, on the hand coming into the slightest contact with it, and he had determined the gardener to destroy it. When I saw it, I soon recognized a formidable nettle of Australia, and gave him the history of its qualities. As it is a rarity in England, he was delighted to retain it, and place it in a situation where it would be seen to advantage. It is also found in the Clarence River district, in the northern part of New South Wales, and is abundant near the borders of rivers, and in the dense scrub forests, where it grows in great luxuriance, and with umbrageous foliage. When it crowds the bush with its large leaves, at no great elevation from the ground, it becomes a great impediment, and even dangerous to the traveller; indeed, there are many instances of horses having been so severely stung, that, from the limbs and bodies of the animals being swollen, they required rest for several days before they were sufficiently recovered from the effects to be capable of resuming their journey.

LARGE WEEPING WILLOW.—The weeping willow (Salix Babylonica) grows plentifully and rapidly in New South Wales. I have seen willow trees planted seventeen years since, which had attained the height of 65 to 70 feet, and a proportionate circumference. Oaks also thrive well, but are of the same slow growth as in England. Ash, elm, and many of our useful English trees although introduced, and growing, are comparatively rare.

OLEANDER.—The oleander or rose bay (Nerium oleander) grows in great luxuriance in Sydney and the vicinity, attaining the height of 15 to 20 feet, and, when covered with its elegant

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clusters of rose-coloured blossoms, forms a blooming ornament to the garden and shrubberies. At Cairo I saw a variety in which the flowers were of a pure white colour, and the tree 8 feet high.

THE AMERICAN ALOE is very plentiful. Its rapidity of growth depends on the situation and climate in which it is placed, but when its full development is attained, whether at five or twenty years, it produces its lofty flowering-stem, after which it gradually decays, leaving a numerous progeny of suckers. The leaves are fleshy, hard, edged with spines, sharp pointed, of a bluish-green colour, and durable. They arise from a short woody stem, and vary in length from four to six feet. The flowering-stem rises from 15 to 30 feet high, and as it is gradually developed from the mass of leaves, resembles the stem of asparagus. In the climate of New South Wales the aloe will frequently begin to bloom about the seventh or eighth year. When the aloe is in full bloom it attracts multitudes of honey-eating birds, revelling in the nectar found at the base of the corolla, and numerous butterflies, among which a brown species (Hipparchia Banksii) was very numerous. The aloe is considered merely as a protracted annual, dying after the production of its flowers. The pith-like flowering-stem, when cut into long slips, in a longitudinal direction, forms an excellent lining for insect cases instead of cork; it also makes good razor-strops, as the stem contains minute portions of silica. The aloe is also used as a fence for the gardens, and very formidable hedges it makes when properly planted. In South America it attains its full growth in three or four years, and the cattle watch their fall with an anxiety which it is curious to witness, and if they can get at the stalk will pull it down and devour its juicy contents. It is well known that a quantity of liquor may be collected in the sockets of these plants by removing the flower-stalks when they begin to sprout, and from which, in Mexico, the spirit called "Pulque" is made—the principal drink of the lower orders in that country, and the source of a large revenue to the Government. A fine fibre can be procured from the leaves, useful for many purposes, and this plant, which grows rapidly and abundantly in New South Wales, might be used, as in other countries, for a variety of manufactures.

CHRISTMAS TREE (Ceratopetalum gummiferum) is preserved on all the grounds where it is found growing wild. It is used, like the holly in England, as a decoration at Christmas, although the red colour imparts a warm tint in the sultry climate of Australia at that season of the year. In November it is covered with minute white blossoms, which, in the following month, about Christmas-day, assume a red colour, as if the flowers had changed suddenly from white to red. Most persons consider this appro-

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priate to the time of year, and so ushering in the festive season. The change of colour is caused by the disappearance of the white flowers, while the persistent calyxes remain, thus imparting to the tree the beautiful red colour, which lasts until the end of February. This pretty tree has not yet been introduced into England. It is of elegant growth, generally straight, with a profusion of delicate branches, attaining the height of 15 to 30 feet, and a circumference of 2 feet.

"HOME AGAIN."

(*From the Florist.*)

HOME again, from the third Grand National Rose Show—*so* tired, and yet too happy, too excited for any beds save those in my rose garden. As some young girl, returning from her first court ball (and am I not just arrived from a "Palace," and from the presence of the Queen of Flowers?), forgets her weariness, and cannot rest until she has "talked it over" with some sympathetic friend; or, as an earnest hunter who has ridden bravely in some trying run, and come home twenty miles in rain and darkness, defies all drowsiness, that he may tell his friends how muffs were pounded and how fields were won—and goes gaily, with his cigar in his mouth, to take a last fond look at his steeds, grinding away at their suppers upon beds of clean white straw; so I, coming home with a thousand pleasant thoughts and memories, must go to my roses and commune with them—go to my roses, with my silver cup in my hand, and tell them of our common victory.

And yet *so* tired! Tired with racing up and down my rose beds in the anxious process of cutting for the show, roving for ever from flower to flower like the butterfly of tuneful memory, but with the addition of rose scissors in one hand, a glorious bloom in the other, and a second between my lips, lovingly osculating; and lo! just as I reach my exhibition boxes, I remember a third flower, of the same kind as those I have brought, and of surpassing merit, and, I need hardly say, at the most distant part of my rosarium. Tired, so tired, with writing out correct lists of all my running horses; with going up to dress for a journey just when one usually undresses for sleep; with shooting over 120 miles of rail between midnight and daybreak (I wonder what that Roman emperor, who made such a fuss about losing a day, would have said if he had lost a *night*), and speculating the while how my pets were travelling in the spacious van behind ("van behind," I remember to have murmured sleepingly, "how can *the van* be behind?"); with rattling over London stones when London

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virtuous was all abed, and little thinking that through her streets the *Emperor Napoleon*, with *Anna de Diesbach* on one side and *Madame Vidot* on the other, were riding on the roof of a cab! with sitting on my rose boxes outside the station at London Bridge, contemplating St. Paul's, and fancying how the dome would look well covered with blooms of "the Cloth of Gold;" with carrying my roses up the steep and steps of Sydenham ("John"—well *not* "Anderson—we've climbed the hill together," and I thank thee, and those two other helpmates, who brought me with a Deal of generous sympathy from the Slough of my great despair); with arranging, altering, consulting, suggesting, "staging"—tired, *so* tired!

Wearied from eye to foot, but too happy to surrender to fatigue. The eye shows an inclination to connect itself with the Early Closing Association, the foot longs to go "bootless home" to rest, and the limbs join in the chorus, when "to-bed, to-bed, says Sleepy-head;" but the heart derides the idea of somnulence with so much mirthful scorn that the rest of the company become quite ashamed of their lassitude, prepare themselves to be cupped instead of being couched, and express their general readiness to make a night of it.

And we make a night of it accordingly, and thus. We fill our silver goblet (we had hoped for another, in letter F, yea after we had seen our opponent's forces drawn out in battle array; but "there's many a slip," you know, and it never reached our labial regions), we fill our pretty goblet with the sparkling waters of Schweppe, corrected with cogniac, for the nights are chill; and we take our seat in our favourite arbour, all the roses blushing around, just as those pretty girls at the rose show stood blushing round us when we gave away our flowers—that was, indeed, "love among the roses," and I almost wept when the last was given, and my heart was carried off by those special pleaders in about thirty-four different directions—and we light our cigar, and think.

Thankful and pleasant thoughts. It is scarcely more than three years since he who thinks them suggested in the pages of the *Florist* a Grand National Rose Show, and thrice he has seen his heart's hope realized. He remembers all the genial aid and sympathy which were so promptly and so freely given when he began to verify his plan; the kind words of encouragement which came from him to whom first he referred for counsel, the "guide" from whom he learned to be a "rose amateur," and now the valued friend; the brotherly co-operation which he at once received from a younger writer on the rose, whose zeal and thoughtfulness never flagged; the hearty help tendered by the

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Florist; the generous subscriptions promised both by growers for sale and amateurs, many of whom volunteered to act as collectors from their friends; and all this kindness to a stranger *because he loved the rose.* From almost every county, from York to Devon; from castle, hall, rectory, grange, and villa; from Scotland—Falkirk, to wit; from Ireland, over the swate bay of Dublin, and from Glasnevin's gardens, came friendly fraternal words. The shamrock and the thistle sent their love to their sweet sister Rose, and

"Bid her come forth,
Suffer herself to be desired,
And not blush so
To be admired."

All this he remembers thankfully. Then he recalls the eventful morning of the first exhibition; his troublesome surmise, what if from my ignorance and inexperience all should be a failure; the support and courage which he gained from one, who, the general of a hundred floral fights, helped him in the hall of St. James as up the hill of Sydenham; the happiness which he felt when he saw the roses arranged in their beauty; and the final and financial triumph, when the British public crowded up the stairs, and he knew that the first National Rose Show had deserved success and won it. And "'t was merry in the hall," my brothers, and your rose-loving hearts beat high with mine, when those cups of silver, thirty and six of them, were distributed among us, that we might raise them high, brimful, and oft, pledging right loyally our royal mistress, and shouting mirthfully, "*Floreat Regina Florum,*" and "*Vive la Reine des Fleurs!*"

Here I refresh myself with Schweppe, and then, recurring to the pleasures of memory, I think of our second rosy réunion, which we held in the house of Hanover (Square); of the grand improvement we made by the introduction of roses in pots, whereby we constructed such banks and thrones of beauty as would have charmed Titania's heart; again I behold the auspicious advent of the Queen's lieges, and pity them, packed like figs, and deafened by our excellent, but too potent, band; and, surveying their sad condensation from above, resolve that in our next place of rendezvous there shall be room for all.

So my reflections bring me to that last happy day at Sydenham, when north, south, east, and west sent up such an exposition of roses as eye hath not seen since Eden; and more than sixteen thousand persons of every grade, from the Duchess of Sutherland (God bless her, and keep her, like her roseate synonyme, a "perpetual bloomer!") downwards, rejoiced in the sunlit scene.

Knights of the Rose, receive my gratulations, and upon two

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successes especially! In the first place the National Rose Show has become, as we who organized it always desired that it should become, *self-supporting*. There will be no further need to tax the generosity of those who gave, and (a still truer proof of earnestness) induced others to give, so freely.* Not only have we a balance at our Banksiæ—I beg your pardon, I mean bank—but rival candidates aspire to the distinction of paying our future expenses.

And let us congratulate each other, heartily, for I come now to speak the happiest thought of all, that our meetings become more evidently, year after year, of a social, friendly character. Some few malcontents, whose hearts, like their roses, are not very large, have been pleased to call us "a clique:" we call ourselves a brotherhood. And every year, unless my eye-glass is very 'rose-coloured' indeed, we become more brotherly—each of us, of course, solicitous for his own success, but, having done his best to win it, obedient to bear defeat. Our censors have been accused of bias, not openly, not manfully, but in an underhand, indirect way, to persons unconcerned. Cowards are not worth kicking, and I will therefore content myself with saying that if any prejudice had been shown, "S. R. H." must have had a slice of it. Whether this has been so, let those who saw my 24 in 1858, and my 12 in 1860, declare. Either of these collections *might have been* placed first, without a dozen words of criticism, but the judges preferred others, and their law at once was mine.

And it is so with the generality of us. We look upon "the National" as our "Derby." It is glorious to win; it is greatness to be 'placed;' it is honourable to run well at all. It is our tournament. We cannot all be victors, but we can all be men. Don't let us lie whining in the dust, and groaning, "Oh, he has so hurt me." "A fresh steed and a new lance," be our cry; "and look to thyself, Sir Knight, when next thou and I shall meet." Did any one see the brave Chief of Cheshunt sulking in a corner of the Alhambra Court, when the Knight of Sussex, successful, was declared to be "the hero of a hundred" blooms? Did Sir Cranston call upon the Great Waterworks to drown his despairing soul? Did the Prior of Caversham excommunicate the Priest of Caunton for preceding him in "the 48's?" Not precisely. They went to the refreshment-tables instead, and, lunching amicably side by side, drank to "our next merry meeting," inaudibly adding, "at which I mean to win."

* I must be permitted to mention, very gratefully, Messrs. Rivers, Paul, Turner, Cranston, the Revs. W. F. Radclyffe, G. E. Maunsell, and A. Rawson; Mr. C. M. Worthington, Capt. Borlase Tibbitts, Mr. H. O. Nethercote, Mr. R. Garnett, etc.

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Now, following the example of Alphonse Karr—did you see his very pretty namesake among Mr. Mallett's roses?—and having made a small "*Voyage autour de mon Jardin*," I must go to roost.

How lovely are the roses in the soft light of eventide! They have regained the firmness of petal, the brightness of colour, which they had lost awhile beneath the summer sun, and, with their rosy faces washed with dew, seem to rest, rejoicing, in the cool tranquillity of the declining day. *General Jaqueminot* and the *Geant* fold their martial cloaks around them, as though preparing for sleep; but awake or nodding, erect or pendent, cupped or expanded, all are beautiful. Most beautiful, as though flushed with victory, those who have been distinguished at "the National." The old favourites seem to exult that they are not wholly superseded, and the belles, more recently introduced, to pride themselves on their first conquests, and to foresee new victories. I take off my hat to them, young and old, wishing them "bon repos," and, after happy morrows, peaceful rest in the Pot-Pourri jar.

Parentally, on my way to bed, I must take a peep at the Nursery, and say good night to the young ones. Good night to Master *Eugene Appert*, at rest upon his noble leaves. He has not attained to the size desiderated, but his complexion is glorious, and until some novelty shall surpass him in shape and circumference no rose garden can be complete without him. This season has not been so favourable to him as the last, but few roses have attracted more attention on the tree, especially from the brighter eyes and rosier lips of our kind. Good night to *Anna de Diesbach*, the largest rose I have seen this summer; to the two Franks, *Francois Premier*, so vivid in colouring and so compact in form, and *Francois Arago*, of rich claret hue—and to those who, with me, think much of contrasts, most valuable for exhibition; to *Armide*, circular and cheerful, well shown by Messrs. Fraser at the National; to *Homere*, a very pretty promising *Tea*—"aliquando bonus dormitat Homerus," and now *I* begin to nod; and so a last good night to the beautiful *Comtesse Cecile de Chabrillant* (let us call her *the Countess*, my brothers, since life really is too short, and our tallies also, for these etymological excesses), of whom I need say little, seeing that Mr. Andrews, pitying my sleepiness, has bravely ventured "to paint the rose," and her sweet ladyship is now before you.* When I first beheld her, escorted by a Knight of the Bath division, Mr. Tiley, to the Hanover Square Rooms, I tendered admiration and allegiance—

"When first I saw thy face, I resolved
To honour and renown thee."

* The *Florist* contains a beautiful drawing of this flower.

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And I have seen her subsequently only to confirm my love. Ample as fair (I blush for some of our fraternity, who persist in describing Duchesses, Countesses, Mesdames, and even Mesdemoiselles, as "robust" and "full"), of perfect symmetry and very "constant," she takes a place at once by the throne of our queen of flowers, and will be the beauty of many a "drawing-room," the belle of many a box.—Good night!

S. R. H.

HINTS FOR A DESCRIPTIVE CATALOGUE OF TULIPS.

Descriptive catalogues owe their origin to the Dutch, who as early as 1764 published a list of hyacinths and tulips, enumerating nearly 700 varieties of the first named; and my catalogue being imperfect in bizarres, owing to a few pages being missing, I have not an opportunity of giving the number of tulips, but I should think 400 varieties would be the total. In this catalogue Lac is inserted, Camuse de Croix, and La Vandyke or Vandikken, Alexander Magnus, and some others not at all grown at the present day.

Butler, who published a descriptive catalogue after the Dutch manner in 1829, states he is indebted to the time of introduction to several Dutch and English catalogues, particularly to the late Mr. Davey's, of Chelsea, who catalogued La Joie de Davey at £157. L'Heroine was introduced in 1782, nearly 80 years ago, and others now lately discarded, 158 years.

In writing descriptive catalogues, great care ought to be taken so as to insure correctness, and it is also essential that some fundamental principle should be laid down as to what constitutes form. Whoever read the various elucidations of form will at once perceive that it is a mere trifle which is the point of difference: all agree as to half a circle being good, although to be singular a trifle less or more is not objected to. Now, there can only be one standard to be correct, and this must be made in obedience to the laws of art. Art recognizes eight parts to the human figure, which is considered the most beautiful as regards proportion, therefore a tulip must be regulated by the same law. We all know how striking a well-proportioned piece of statuary is to the eye, and how also when out of proportion it has a contrary effect: so it is with the tulip; it must be harmonious in all its parts, and when above the half circle detracts from its merits, however well it may mark. Only look at a tall man or woman and you will see how, when contrasted with one of medium size, the tall one is out of character almost in every point. So, again, a

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tulip with a long cup will not appear to the eye so attractive as one not quite as large but well proportioned. All above a certain standard generally are coarse and rough; whilst the medium sized bloom is full of lines of beauty. Take the half circle for a basis, and we shall not err.

Colour is not so essential as form, only it is well to have decided roses and decided byblœmens; a rosy byblœmen, however good its form and purity, loses many points, as it can scarcely be said to belong to either class; whilst one of a purple colour must, if equal in form, decidedly have a great advantage over its rival competitor. The most beautiful of roses are those of a rich scarlet colour, or approaching it, and in byblœmens a dark purple will be more attractive to the eye than one of a pale hue. Bizarres cannot well be classed in one, as a great objection is made to red feathered ones, whilst the darker coloured ones are highly esteemed. There is equal points in both; but a matter of taste arises as to the preference, as we do in our choice for partners, some like a dark complexion and others a light one; certainly, a good yellow ground and dark brown feather is very attractive, from the colours harmonizing better than a yellow ground and a red feather, as the contrast is so much greater, and this causes its becoming our especial favourite.

I think I shall be fully understood as to what I mean by form, so that in the descriptions which shall be given there can be no mistake as to what constitutes a good one, and also what is a bad one.

Cheetham Hill, Manchester. JOHN SLATER.

ON NAMES AND VARIETIES OF CULTIVATED PLANTS.

THE multiplicity of names and varieties of cultivated plants is becoming a serious evil, especially to country growers. In looking over a London nurseryman's catalogue one is quite perplexed with the many varieties, new and old, of trees, flowers, and vegetables and fruit bearing plants; for instance, strawberries, we may now procure a list of some 150 varieties, most of which are recommended; yet, with all the boasted qualities of many new ones, on trial of more than 40 sorts I find none better for early use and forcing than the old Keen's Seedling; it is an abundant cropper, fine colour, and good flavour, which qualities are seldom combined in the new and high-priced sorts; and for later crop none to equal the old British Queen. Then again in flowers, if one gets a new high-priced variety, we often find it far from equal to old and common ones,

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and in many instances with difficulty distinguishable from others we have grown for years. Then in vegetables—peas, for instance, what has yet appeared to equal, for first crop, Sangster's No. 1, with its many synonymes; and for second, Rising Sun; and for late, Knight's old Green Tall and Dwarf Marrows? How often we get old things under new names and high prices! instance the old Beehive Strawberry, the greatest humbug ever offered, advertised again after a sleep of twenty years at least, to my own knowledge, having paid a high price for it when it first came out, and found it nothing more than the old Alpine. And now our lawns must be made to do without mowing by planting them with Spergula pilifera, a new high-sounding name for the old and common plant Sagina procumbens, described in a popular gardener's dictionary as "one of our prettiest alpine plants, which makes a close carpet on the ground, spreading far and wide, and has starry white flowers," the very thing itself, although we are now told for trade purposes that this is a worthless *annual*. I know a nurseryman who has used it for the last thirty years as edging for his flower-beds, under the old name of Sagina procumbens, only cutting the edges annually to keep it from spreading too wide. Again, amongst vegetables, who has heard of the New Zealand Runner bean since its first appearance in 1858? These examples I am sorry to say are few, *very few*, of the many old plants advertised as new, or, if new, not nearly so good as the old. A select list* of really good fruits, vegetables, and flowers, regardless of their being new or old, will perhaps not be unacceptable to the readers of your next number. B.

THE TULIPS AND THE NATIONAL.

(*Continued from page* 205.)

ADDISON.—This flower is, I believe, identical with Lawrence's Friend, and I would therefore refer the reader to that description. The author of the description in the "Horticultural Magazine" says, "It is a byblœmen of very dark colour and good white, deep feathered as Washington, somewhat taller, not much unlike Lawrence's Friend as to style of flower, though very perceptibly different. A good second-row flower, and a fine root does for a third." I find, however, that the two varieties grown by me, and by several others, are identical, and I am borne out in my opinion by Mr. Turner and others. Exhibited 1857, 1.

ADMIRAL CODRINGTON.—A flamed bizarre of good qualities. This I have seen in Mr. Betteridge's collection, but cannot speak

* Which we shall be most happy to receive.—ED. M. F.

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more positively of its merits than, if it be constant, it is a most desirable acquisition. Exhibited 1856, 1.

ALICE (Crook).—A very pretty rose. As shown it was a flame, and was something like a good bloom of Aglaia. Exhibited 1859, 1.

BEAUTY.—Beauty of the Plain?—my notes, unfortunately, are not explicit—or was it Beauty (Walker), a second row byblœmen? Exhibited 1857, 1.

BEAUTY OF THE PLAIN.—A fine flamed byblœmen, exhibited in 1856 by Mr. Lawrence. Exhibited 1856, 1.

BELLE NANETTE.—A feathered rose much in the style of Heroine; I think, however, they differ. Exhibited 1859, 1.

BESSY.—No notes. Exhibited 1860, 1.

BIJOU.—A flower raised by an old friend and tulip grower, Mr. Scarnell, and generally termed Scarnell's Bijou. Is too uncertain in colour. Exhibited 1857, 1.

BIJOU DE AMATEUR.—A third row byblœmen. A second or third row strong marking flower, creamy bottom, feather and flame very dark, and but for the yellow stain in the bottom it would be grown by most collectors. Exhibited 1856, 1.

BRIDESMAID.—A flamed byblœmen. The one exhibited in the Manchester exhibition was unfortunately cloudy; the petals were long. This cloudiness, however, has been less perceptible in a bloom I have seen since.

CAMUSE DE CROIX.—A second row rose. [A very delicate and handsome rose, which comes out with a straw-coloured ground, and rich crimson scarlet markings. The straw-colour appears to be caused by the extreme thickness of the petal, which is a long time getting to its proper whiteness. It is justly esteemed as a star in the first row, and the markings are generally very uniform and splendid pencilling. When perfectly bloomed the appearance is very grand indeed, though it is some days coming to its proper colour. It is a dear flower, and will remain so as long as it is scarce and in demand.] Exhibited 1858, 1.

CELIA.—Described by yourself in page 180. Exhibited 1860, 1.

CERISE BLANCHE.—A first row rose of ordinary properties. Exhibited 1858, 1.

CHARBONNIER.—A flamed third row bizarre. If my memory serves me right, this was a pleasing flower, quite pure. It is frequently, and perhaps more properly, termed Charbonnier Noir. [A very pure bizarre, with very bad marking; that is to say, there is great uncertainty. It is very apt to come with portions of the breeder colour, so much so as to scarcely afford a showable or well marked bloom in twenty, but when perfect a most splendid

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bizarre; fine, but pale yellow, splendid bottom, not a bad form.] Exhibited 1856, 1.

CHARLES BROWN.—A second row bizarre, raised and broken by Mr. Brown. It has many fine qualities, and is a good flower in a stand. Exhibited 1859, 1.

COLBERT.—A fine bizarre raised by Mr. Slater. I have only seen this once, but believe it to be good. Exhibited 1860, 1.

COLONEL WYNDHAM.—This flower, a feathered and flamed bizarre, will never attain any great favour. As shown, it was bad in shape; it is true, purity was undeniable, but even purity and all other traits cannot make it a good flower without form. Exhibited 1859, 1.

COUNT.—No notes. Exhibited 1860, 1.

COTTERILL'S ELIZABETH.—This flower, shown only by the Rev. S. Creswell, is described by Mr. Allestree as "delicate feathered bizarre, pure and good." It is a third row flower. Exhibited 1859, 1.

COUNTESS OF WILTON.—A third row flamed rose, of good quality when pure. It is, I think, however, apt to be rather stained in the base of the bean. Exhibited 1859, 1.

CROOK'S MARY.—A very nice feathered rose of first class quality, and will, I believe, make an established favourite. Exhibited 1857, 1.

DARIUS.—A flamed bizarre, very like, if not identical with, Earl Douglas, or Kelpis. Exhibited 1856, 1.

DEMOSTHENES.—One of Mr. Headly's flowers, and was much admired at the National exhibition. Exhibited 1860, 1.

DON RODCOCK.—No notes. Exhibited 1860, 1.

DUCHESS OF WILTON.—This, I should say, is the same as Countess of Wilton, but have no confirmatory notes. Exhibited 1856, 1.

DUKE DE BOOFLEURS.—Have seen this flower good, but cannot say where—not, however, the flower here exhibited. Exhibited 1856, 1.

DUKE OF NORTHUMBERLAND.—Very like Mrs. Siddons or Blœmart. It is a second row byblœmen. Exhibited 1859, 1.

ELLEN.—I believe generally termed Hunt's Ellen, but unfortunately cannot find any notes. Exhibited 1860, 1.

EMILY.—Rose. A third row, Lawrence. Mr. Allestree says classed as a rose, but undoubtedly a byblœmen, generally pure, though occasionally tinged at the top of the filaments. When fine, heavily and correctly marked. Exhibited 1856, 1.

ENCHANTRESS.—A second row rose, broken by Mr. Lawrence. Exhibited 1856, 1.

EUPHRATES.—I have only seen once, that was in Mr.

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Norman's pan, Sheffield. Unfortunately I did not enter it in my notes. Mr. Allestree says it was full of breeder colour. Exhibited 1858, 1.

EURYDICE.—A splendid feathered bizarre, second row flower. Raised and broken by Mr. Groves; and although likened to several other varieties, is undoubtedly distinct. Exhibited 1856, 1.

FANNY.—A flower (feathered rose, I believe) exhibited by Mr. Headly, but unfortunately my notes are lost—perhaps Mr. H. would please say. Exhibited 1859, 1.

FANNY CERITO.—A fine flamed rose. Exhibited 1858, 1.

FANNY ELSLER.—A flamed rose, of good expectation. Exhibited 1857, 1.

FIRST-RATE (Spencer's).—Mr. Allestree says Sarah Ann, or flamed Maid of Orleans. Mr. Parkinson, of Derby, says, in speaking of what is generally termed Dark Princess Royal (see Princess Royal), "This variety was first broken by Mr. Spencer of Adbolton, and called First-rate, but I now find the same sort figuring about Nottingham as Sir John Franklin."

FLEUR DE MARIE.—A fine second row rose, raised by Mr. Groom. It is of the flamed class. Mr. Slater says, "It is a flamed rose, very pure, and marks well, but the petals are narrow, and the cup too long." I, for my own part, do not quite agree with him on this point: a bloom I saw last season was not more than the average depth. Mr. Walker describes it as a third row, regular, dark cherry feather, and carmine branching, flamed cup, rather long, but a very distinct flower. Exhibited 1857, 1.

FRANKLIN'S SUPERB.—No notes. Exhibited 1860, 1.

GARRICK.—A third row bizarre, broken by Mr. Lawrence. Exhibited 1856, 1.

GENERAL HAVELOCK.—Described by Mr. Sutton as a good red bizarre, short cup, and fine. One of Mr. Headly's seedlings. Exhibited 1860, 1.

GIULIO ROMANO.—Exhibited 1856, 1.

GODET PARFAIT.—A byblœmen of ordinary properties. Exhibited 1856, 1.

GYGAS.—Exhibited 1856.

H. B. STOWE.—Described by Mr. Sutton as a fine deep-feathered byblœmen, short cup, and pure, and a fine variety. Exhibited 1860, 1.

HELEN.—A seedling feathered byblœmen, broken and raised by Mr. Hunt. The bloom exhibited at the National of 1856 was fine, and augured success. Exhibited 1856, 1.

HELENA.—One of Mr. Headly's seedlings. Exhibited 1859, 1.

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HERMIONE.—Another of Mr. Headly's seedlings, and a very fine flamed rose. Exhibited 1860, 1.

ISABELLA.—No notes. Exhibited 1859, 1.

JOHN KEMBLE (Goldham's).—Exhibited only by Mr. Williams. Described by Mr. Walker as a second row, very dark plaited feather and purple flame, fine white ground; very pure and constant, opens early and stands well.

JUPITER.—No notes. Exhibited 1859, 1.

JULIET.—One of the first flowers we possess; indeed, if I was called upon to name the finest rose breeder we have, my choice would fall on Willison's Juliet. It is a second row flower, feathers well, first-rate cup, and is quite pure. I quite disagree with Mr. Slater, who says, "It is doubtful if it will mark well enough to make a first-rate variety. Exhibited 1857, 1.

KING ARTHUR.—Exhibited 1857, 1.

NATIONAL CARNATION AND PICOTEE SOCIETY.

THAT National meetings devoted to the exhibition of one flower in particular are to be commended, past experience teaches us. Tulips and carnations and picotees have been followed by roses and dahlias, and already very great signs of improvement have been manifested. We must say we long to see National meetings held in connection with other favourites, especially the chrysanthemum and spring flowers, viz., polyanthuses, hyacinths, and auriculas. It is not, however, the place to discuss these prospects, but to make some notice of the exhibition just past, and which was held at Leeds on August 8th, in the Town Hall. We cannot regard the meeting as one of the greatest successes of the society; but we do hail with delight the resuscitation given to it by our Leeds friends. Last year we complained that all the southern growers had deserted the society, and that there was quite an anomaly in holding a National and also a Northern Counties meeting. This year north and south are ably represented, and it is with great delight we hail the return of one great at roses, great at dahlias, and great at carnations and picotees—Mr. John Keynes of Salisbury. The number of blooms, and consequently the number of exhibitors, and the number of prizes have been less; but who can wonder, in this thoroughly chronic state of the weather, even if flower-shows were totally suspended. If we cannot congratulate each other on the dryness of the season, we at the same time cannot complain that the weather is unsettled or changeable—wet, wet and cold—all alike. By comparison with last year's list, it will be seen that there are a great many of the old standard

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varieties which were not to be seen. In Carnations:—*Crimson Bizarres:* Sarah Payne, Jenny Lind, and Lord Milton were exhibited, taking the places of Black Diamond and Warrior. In *Scarlet Bizarres:* Admiral Curzon, so popular and in almost every stand last season, is totally excluded. Dreadnought, Atlas, and Perfection (the last two fine seedlings of Mr. Keynes) are the representatives in the class. In Scarlet Flakes: Splendour, which was top of the class, and Lady Curzon, also very popular, are not to be found; while John Bayley, Christopher Sly, Uncle Tom, and Vivid, are respectively the highest in numbers. In Rose Flakes: Lovely Ann and Queen Boadicea, which stood very top, are not to be found; indeed, Rose of Castille is the only great gun; while Purple Flakes are represented by Earl Stamford, Pre-eminent, and Albion. The last two splendid seedlings of Mr. Keynes, Squire Meynell and Premier, such universal favourites last season, not being shown at all. In Picotees:—*Heavy Purple Class:* Alfred (3), Countess (2), Garibaldi seedling (2), stand first; Keynes' New Colour, Glory, Dido, are new candidates; Mrs. Bayley, which stood first, is only exhibited once, and Lord Nelson, the second last year, is not to be found. *Light Purple Class:* Finis takes the lead (7), Standard, a new variety (3), Amy Robsart, the favourite last season (2), Mrs. Eyre and Haidee are absent. *Heavy Rose Class:* Mrs. Drake stands first (5), Rev. H. Matthews (2), Eliza (1), and Princess Alice (1), these new varieties completing the list. Aurora, Venus, and Queen, all first favourites last season, are not to be found. *Light Rose:* Bertha takes the lead (7), closely followed by Mrs. Turner (6); Queen of Picotees (3) and Fanny are new candidates. We miss Crystal, Eva, and Mrs. Barnard. *Heavy Red Class:* Mrs. Dodwell (2), Dr. Pitman (2), are the old varieties; Superb (2), Magnificent (2), Favourite (1), Miss Wood (1), are new; Sultana, Mrs. Norman, Mrs. Hoyle, and Lauretta are missing. *Light Red Class:* Eugenie (4), Miss Holbeck (2), and Mr. Turner (1), stand in the same position as last year, except that Ada Mary, which was at the top, is absent. In giving the list, I would not wish to disparage the absent flowers; the season has been such, and the two exhibitions have been attended under such different circumstances, besides weather, that it would be folly so to do. In all probability, many of the varieties, which are now absent, may again be in full force next season.

The judges were: For gardeners—Mr. H. Steward, York; Mr. Aukland, Chesterfield; Mr. Lea, Leigh; Mr. S. Hartley, Potternewton; and Mr. Chadwick, Leeds. For amateurs—Mr. Edwards of York, and Mr. Keynes of Salisbury. For cut flowers—Mr. Appleby and Mr. Wight of Bishopsthorpe.

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Premier Carnation, from the whole exhibition, Uncle Tom, rose flake—H. Steward, Esq., York.

Premier Picotee, from the whole exhibition, Finis, exhibited by Mr. E. Wood, York.

Class A.—Premier prize for twelve carnations and twelve picotees, for nurserymen, silver cup, value £5, to Mr. John Keynes, Salisbury, with carnations Pre-eminent, Harry, Conqueror, Poor Sam, Alboni (these are Mr. Keynes' seedlings), Sarah Payne (Ward), Flora's Garland (Brooks), Florence Nightingale (Sealey), Young Milton (Hopwood), Christopher Sly (Keynes), Fanny Keynes (Keynes), Payflower (Keynes); picotees (all seedlings), Magnificent, Harriet, Jeannie Deans, Diadem, Queen of Picotees, Superb, Standard, Polly, Mrs. Nash, Purple King, Rosabella, and Pretty Jane.

Class B.—Premier prize for twelve carnations and twelve picotees, for private growers, a silver cup, value £5, to Henry Steward, Esq., York, with carnations Tenby Rival, Friar Lawrence, General Havelock, scarlet flake, fine; Earl Stamford, John Bayley, Uncle Tom, rose flake (this flower was splendid, and obtained the premier prize), Sarah Payne, Uncle Tom, Earl of Stamford, Poor Tom, Vivid; picotees, Mrs. Pitman, Mrs. Turner, very fine; Countess, Finis, Mrs. Dodwell, National, Bertha, rather thin, but fine; National, very fine; Mrs. Drake, Alfred, small, but in fine condition; and Unexpected.

Class C.—Six carnations and six picotees. Premier prize, open to cultivators whose stock shall not exceed 150 pairs, a silver cup, value £2 10*s*., to Mr. E. Wood, York, with carnations John Bayley, Earl of Stamford, Vivid, a sport from Comet; Rose of Castille, Christopher Sly, Lorenzo; picotees Mrs. Drake, National, Bertha, Finis, a splendid bloom, which obtained the premier prize; Garibaldi, a seedling of Mr. Wood's, a promising medium purple-edged flower; and Mrs. Turner, good.

Class D.—Nurserymen. Twelve carnations.—First, Mr. John Keynes, with Pre-eminent, a very fine purple flake; Conqueror, Bianca, Steadfast, Poor Tom, Jessie, a pink bizarre; America, Anna Keynes, John Marsh, Oscar, Peter Young, and John Bayley. (The whole of these, with the exception of Poor Tom and John Bayley, were seedlings.) Second, Mr. G. Edwards, York.

Class E.—Nurserymen. Twelve picotees.—First, Mr. J. Keynes, with Jane, Duchess of Kent, Polly, Alicia, Alpha, Marian, medium purple, a little rough on the edge, otherwise a fine petaled flower; Standard, Neville Keynes, Mrs. Nash, Purple King, Queen of Picotees, and Albion (all seedlings). Second, Mr. G. Edwards, York, with Amy Robsart, Ophelia, Dr. Pitman,

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Countess, Finis, fine; Jeannette, Lady Franklin, Juliet, National, Mrs. Holbeck, fine; Charles Turner, fine.

Class F. Twelve carnations, private growers.—First, Mr. E. Wood, York, with Jenny Lind (Puxley), Rose of Castille, John Bayley, a fine Rose of Castille, Dreadnought, Tenby Rival, Friar Lawrence, Lorenzo, Christopher Sly, Premier, John Bayley, Esther.

Class G. Twelve picotees, private growers.—First, Mr. Henry Steward, York, with Mrs. Drake, good; Mrs. Dodwell, Bertha, Alfred, Mrs. Turner, good; Unexpected, Bertha, Alfred, Mrs. Turner, Mrs. Drake, National, Mrs. Bayley.

Class H. Six carnations, open to cultivators whose stock shall not exceed 150 pairs.—First, Mr. C. Auckland, with Sarah Payne, Earl of Stamford, Sportsman, fine in colour, but rather heavily marked, a good Lord Milton, Rose of Castille, and Premier. Second, Mr. E. Wood, with Dreadnought, Lorenzo, fine; Tenby Rival, John Bayley, a good Earl of Stamford, and Rose of Castille, fine.

Class I. Six picotees, open to cultivators whose stock shall not exceed 150 pairs.—First, Mr. E. Wood, with Finis, Garibaldi, Bertha, Eugenie, Mrs. Turner, and Miss Wood, a seedling, heavy red, small, but promising. These blooms were much smaller than those in the second stand, but much purer in the marking. Second, Mr. C. Auckland, with Mrs. Turner, Miss Holbeck, Mrs. May, Finis, Amy Robsart, and Mrs. Drake.

Class K. Single specimens.—*Scarlet Bizarres:* First, Mr. Keynes, Perfection (Keynes). Second, ditto, Atlas (Keynes). Third and Fourth, not awarded. *Pink Bizarres:* First, Mr. Keynes, Conqueror (Keynes). Second, ditto, Jessie (Keynes). Third, ditto, Falconbridge. Fourth, ditto, Jessie. *Scarlet Flake:* First, Mr. Keynes, Goldfinder (Keynes), very fine. Second, ditto, Cleopatra. Third, ditto, Seedling. Fourth, Mr. G. Edward, John Bayley. *Purple Flakes:* First, Mr. Keynes, Sultana, fine. Second, ditto, Alboni (Keynes), fine. Third, Mr. G. Edwards, no name. Fourth, Mr. H. Steward, Earl of Stamford. *Rose Flakes:* First, Mr. Turner, Slough, with a splendid bloom of Rose of Castille. Second, Mr. Keynes, with a very fine Mrs. Pigott. Third, ditto, triumphant. Fourth, ditto, Joan of Arc. *Light Red Picotees:* First, Mr. E. Wood, Eugenie. Second, Mr. G. Edward, ditto. Third, Mr. H. Steward, ditto. Fourth, not awarded. *Heavy Red Picotees:* First and Second, Mr. Keynes, Superb. Third, Mr. Turner, Favourite. Fourth, Mr. Keynes, Magnificent. *Light Purple Picotees:* First, Second, and Third, Mr. G. Edwards, with Finis. Fourth, Mr. Keynes, Standard. *Heavy Purple Picotees:* First, Mr. Keynes, Dido. Second, ditto, Glory. Third, Mr. C. Auckland, no name. Fourth, Mr. Keynes,

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"Keynes' New Colour." *Light Rose:* First, Mr. Keynes, Queen of Picotees. Second, ditto, Fanny. Third, Mr. H. Steward, Bertha. Fourth, Mr. E. Wood, ditto. *Heavy Rose:* First and Second, Mr. Turner, with very fine Rev. H. Matthews. Third and Fourth, ditto, with Turner's Eliza, and Princess Alice.

A seedling fancy picotee, Countess of Derby, exhibited by Mr. Keynes, obtained a certificate. It is a pinkish purple variety, and obtained a label of commendation at the Horticultural Society's floral meeting on the 9th; and a certificate was also awarded to seedling picotee Standard, light purple edge, from Mr. Keynes. Mr. Charles Schofield, of Leeds, also sent two stands of carnations and picotees, which were not for competition.

Pansies (*twenty-four*).—Mr. W. Dean, nurseryman, Shipley, was first with Lord Chancellor, Great Northern, Saturn, Alexander Macnab, William, Duchess of Hamilton, Mary Jane, Ladyburn Beauty, Peter Lyle, Nymph, Mr. T. Graham, Lord Raglan, Blinkbonny, Malakoff, Duke of Sutherland, James Peddie, Yellow Model, Seraph, and seedlings. Second, Mr. T. Dale, Armley. *Twelve pansies.*—First and second, Mr. Dale. Dreadnought, a fine dark self pansy, was sent by Mr. Auckland, and was awarded a certificate.

In roses, Mr. May obtained first and second prizes, among which were Jules Margottin, General Jacqueminot, Colonel de Rougemont, Madame de Cambaceres, a remarkably fine Victor Trouillard, a splendid Lælia, William Griffiths, Madame Domage, Madame Masson, Madame Hector Jaquin, very fine; La Fontaine, Souvenir de Malmaison, Alexandrine Bachmeteff, Gloire de Dijon, in fine character; Anna de Diesbach, Lord Raglan, Madame Vidot, very fine; Pauline Lansezeur, Baronne Hallez, Anna Alexieff, very good; La Reine, Madame Rivers, Coupe de Hebe, and Thomas Rivers. Third, Mr. Robinson, Bramham. Fourth, Mr. J. Clayton, Rothwell.

In *sixes:* First, Mr. R. Nelson, York; second, Mr. J. Green, Garforth; third, Mr. H. Steward, York; fourth, Mr. J. Clayton, Rothwell.

Mr. Francis, nurseryman, Hertford, also sent a very handsome collection, not for competition, which attracted considerable attention.

Verbenas (*twenty-four*).—First, Mr. R. Nelson, York; second and third, Mr. T. Dale; fourth, Mr. G. Edwards, York. *Twelve:* First, Mr. R. Nelson; second and fourth, Mr. Dale; third, Mr. H. Steward, York.

Bouquets were numerous, and attracted much attention.

Mr. Robertson, nurseryman, Paisley, exhibited two plants of Wizard of the North strawberry, together with dishes of fruit.

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The hall was ornamented with handsome new begonias, caladiums, ferns, and other plants, including a plant in bloom of the very fine and handsome Clematis lanuguinosa, contributed by Mr. W. Dean; also some fine plants from Mr. Dymont, gardener to W. G. Joy, Esq.

THE POLYANTHUS—ITS PROSPECTS.

MR. EDITOR,—I am sorry to say illness alone has prevented me addressing you sooner, having scarcely known a week's health since I last saw you at Nottingham.

I much regret to find the polyanthus is becoming so scarce, and I fear fast going to decay. Some of our best varieties are entirely lost; Squire Ray not to be obtained, Lord Brougham, scarcely remembered by many, entirely gone, Earl Grey, Lord Lincoln, and many others, fast approaching the same fate. I think no one can have had worse luck in this class of plants than myself, having thrice lost nearly the whole of my stock within the last four years, by accidental circumstances. Last spring I had marked off fourteen seedlings that were worthy of a place in any collection. These were all raised from Cobden; but illness throughout the winter caused them to be neglected, and they are all gone. I have through this season been trying to get in a fresh supply, but could only succeed in obtaining a few varieties. I find many want to purchase, but scarcely any are able to supply.

It would be a source of extreme gratification to me could I suggest anything to stay this fatal tendency. I am not aware that anything has been omitted in my simple mode of cultivation, previously given; although I admit some situations are much against the growth of this class of plants, few can be worse situated than myself in this respect. My garden, as you well know, Mr. Editor, is high lying, poor, sandy soil, surrounded with smoke and dust, yet few amateurs have propagated a greater number—not by any secret or superior method, but by constant attention.

We have been much mistaken in supposing the polyanthus could not be successfully grown in pots. I have, this last spring, seen perhaps the finest lot of plants ever witnessed, all grown in pots throughout the year. My very kind friend, Mr. Goodwin, of Codnor Park, honoured several friends and myself with an invitation to go over and see his polyanthuses and hyacinths when in

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bloom. We were first introduced to his hyacinth bed, not very large, but extremely neat and beautifully arranged, possessing some of the finest and cleanest blooms I have seen for many years. After feasting our eyes an hour, we moved on to the polyanthuses. Previous to seeing them, I had expressed a fear we had begun at the wrong end by seeing the best first, but was mistaken; for the polyanthuses were fully equal, if not superior, to his hyacinths, many of them bearing eighteen to twenty pips upon a stem. The varieties consisted chiefly of Burk's George the Fourth, Bullock's Lancer, Free Bloomer, and several plants each of Richard Cobden, Traveller, and Elliot's Sir Sydney Smith, the latter an old variety, not often seen now-a-days, not first-rate, save the colour, being a bright red, for which it would be worth trying for seed. We want, at least I am anxious to raise one of good property, the colour of Lee's Superb, a very old but pleasing variety in colour, being a brilliant rosy scarlet, with rich golden eye and lacing, a sort I should much like to purchase if any grower has it to spare.

Mr. Goodwin grows the whole of his polyanthuses in pots, plunged up to the rims in sawdust, raised to within a few inches of the top of the frame, occasionally covered down with glass lights through the winter, until the blooms are fallen; they are then removed into a shady situation, and repotted early in July. They are, without exception, the strongest and most healthy plants I ever saw.

A word of advice: if we are to retain the auricula, hyacinth, and the polyanthus, we must have spring shows. Let there be but half-a-dozen for 1861, well supported; 1862 would record fifty, or double that number. There are plenty who delight in and would grow them; but they want stimulating to rivalry. It is almost an age since we held a spring exhibition in Nottingham. Many florists of the present day have never witnessed a first-rate collection of auriculas. My pet over all others, which I have grown and delighted in nearly forty years, show or no show, they will remain with me while life lasts; and during my time I have grown all kinds of florists' flowers, but none ever drew forth so much admiration from visitors as my spring show of auriculas.

We may and do, a solitary few of us, keep raising seedlings year after year, but they are never known but by the raiser and a few of his neighbours. Their merits are never tested in competition, and few would be disposed, or ought they, to place much reliance on the raiser's opinion, which is too often partial; but where a seedling is exhibited, in competition with known, good, established varieties, and takes the lead or a permanent position,

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there is at once a guarantee to the distant florist, who has not the convenience to come and judge for himself.

I am happy to say, as a reconciliation for the loss of the above-named polyanthuses, we have several seedlings raised in this locality, in my opinion quite equal, if not superior, and of more robust habits. I hope, wherever a few are grown, the seed has been carefully preserved from healthy plants, which, if not already sown, it had better be deferred till January.

In calling to mind the origin and parentage of some of our best varieties, we find they have sprung from inferior sorts. Mr. Hufton's, I believe, were first originated from Park's Nelson, which first produced his famous George the Fourth, the best he ever raised; but unfortunately, after getting a good stock, for which, I am told, an offer of ten pounds was refused only a few days prior to their being stolen, and not a single plant left; by whom or where it went is not known, as it was never seen or heard of after. From this seedling came Lincoln, Brougham, Earl Grey, Traveller, and several others. My late friend, Mr. Brown, of Ilkeston, raised a vast quantity of seedlings during his life, chiefly, in the first instance, from inferior sorts and seedlings. Free Bloomer was the first flower I became acquainted with, though he had raised many previous, but lost them. From Free Bloomer we have Lamartine, an extremely rich, black, and lemon-coloured flower, well laid, but bad shaped; and yet we have Cobden, from Lamartine, so good in shape, but not near so rich in colour. There were also two red ones of great promise, viz., Sir Robert Peel and Mr. Moxon. All the sorts put together that I have tried are not equal to Cobden in producing first-rate seedlings.

In closing for the present this very meagre paper, let me entertain a hope that something will be done towards a show for next spring. If spared, I promise a treat in some seedling auriculas and polyanthuses, having several of the former already proved, and some hundreds on trial, most of which, according to present appearance, will be in fine condition. Anything that my humble abilities can render shall be on demand. Let us try what can be done.

One strong reason may be urged why the cultivation of the polyanthus should be especially encouraged in our own locality. Whilst other counties have grown largely, a considerable majority of our best show flowers have been raised within a very few miles of Nottingham.

I have a few notes on auriculas, if acceptable. Health permitting, they shall be at your service in a future paper. I am not aware that I have any to spare; yet to those who are disposed

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to commence cultivating them, a descriptive list may be of service for their guidance.

I am, Sir, yours very truly,

SAMUEL HAMMOND.

Radford, Nottingham, Aug. 21, 1860.

[We are greatly indebted to our kind-hearted friend for the present and his former clear directions for the culture of the polyanthus, printed in the last volume. We desire to see, in the midland counties especially, an exhibition of spring flowers, and shall only be too happy to render any assistance. The matter simply requires a commencement; and we know of no one who could so well carry it out as our friend or Mr. Goodwin, of Codnor Park. We hope Mr. H.'s health will speedily allow of his favouring us all with the notes on the auriculas—practical papers from one so well acquainted are eagerly desired and sought after.—ED. M. F.]

BREAKING OF SEEDLINGS AND BREEDER TULIPS INTO COLOUR.

HAVING been solicited by several friends to give a short article on this subject, I do so with pleasure. So far as my own practical experience has taught me, I will endeavour to give such information as will be found useful, not only to beginners, but also to others who may not be prejudiced to their own ideas.

I have had many years' practice in the growth of florists' flowers, and I question if any one has tried more experiments. With all my experience, however, I am not vain enough to assert that I have gained superior knowledge to everybody else. I am still quite green; and there may be other cultivators who have been more successful. I am sure, however, that not only myself, but many of the readers of the "Midland Florist," will be very happy to read an article on the subject of rectifying of breeders and bad strains into such colours and markings as we wish to see. To break a breeder requires a stimulus of some sort, and that stimulant must be given in the soil in which the bulbs are planted. Some say that strong growth will do it; others, again, are in favour of weak growth. Both these dogmas may do a little; a few breaks, or partly broken flowers, may be the result, although a much more certain method would be to change the soil and situation. Unfortunately, tulip-growers, and indeed many other growers of choice flowers, cannot place confidence in their friends at a distance; otherwise very much might be done in this way which would be serviceable to all parties. As it is, we must use our

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best exertions and must not be sparing of a little labour or expense; for few objects can be attained without both. As the season will soon be here for planting, no time should be lost. In former years I have advocated a change of soil yearly; and where this is to be got, undoubtedly it is the best for the growth and fine blooming of tulips.

But, for the purpose of breaking breeders into colour, something more will be required than merely this exchange of soil from one part of the garden to another. A complete change must be effected; and, having tried several experiments, some of which have answered and others have not—for I do not recommend to others what I have not tried myself—I would, however, say, that that any one possessing a stock of breeders, and who will try a portion of his stock first, I have no hesitation in saying that he will not object to treat the remainder in the same way afterwards. I don't say that the compost I speak of will insure a vigorous growth, or that there will be much increase; for it will more have a tendency to weaken them. Still they will take up sound and healthy, and the next year will be found to grow stronger and bloom better than the general stock of broken flowers.

No time should be at once lost in getting together all the weeds and rubbish from the garden, and a quantity of leaves from the roadside or from a meadow, and, also, from the carpenter or saw-mills a quantity of shavings or sawdust, and other waste wood; make a fire of the wood, rubbish, and weeds, and add the turf, and when the fire has attained a sufficient strength add a good lot of oyster shells, then a lot of litter, and cover the whole over with earth, when it may be allowed to smoulder until it is reduced to dust.

Take out the soil from your beds a foot or fourteen inches deep, in the bed in which you purpose to plant your breeders, and to every twenty yards in length take a bushel of fresh soil, and strew it evenly all over; then put in the burnt stuff, let it remain a short time, and so be exposed to the various changes of the atmosphere. In a fortnight it may be forked over, and left till the middle of October; place on one inch of good maiden earth, on this plant your breeder bulbs, and cover in in the usual way. If this is done according to these directions, next March you will see light green and striped leaves on this same bed. I don't say that every one will be such, but a large quantity will be; and of those which are not, the majority will, the following year, break, if planted in regular soil. In the October number I propose to give a short paper on the property of the tulip—its colouring, style of marking, and how to get the colour in its proper place.

Lea Bridge Road, Leyton. JOHN HEPWORTH.

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THE VEGETABLE GARDEN—SEPTEMBER.

Brocoli.—Fork the ground between the plants, to assist their growth, and to destroy weeds. Mould them up, if they are long in the stem, but not otherwise.

Onions.—For transplanting, sow without delay, if not done last month.

Carrots.—A few early Horn may be sown for spring use.

Coleworts.—Plant out on all vacant ground not required for other crops; they will come in serviceable when other vegetables are scarce.

Cabbages.—Manure and prepare the land for planting out the first week of October.

There are no other garden-seeds than the foregoing that can be sown with any prospect of success; the year is now too far gone for it. The principal work of the month is, to earth up celery, tie endive, selecting a dry day, save seeds and herbs, finish drying and housing onions, take up potatoes, and get all the garden in clean and neat order.—James Levesque, *Market Gardens, St. Lawrence, Jersey.*

NOTES AND QUERIES.

[We shall feel obliged by any Correspondent or Subscriber forwarding answers to any of the following queries.]

Crocus Seed.—Will you or any of your numerous correspondents be so good as to favour me with some advice concerning crocuses? I planted some last October; they bloomed well during spring, and about six weeks ago I was rather surprised to see a good many seed-pods making their appearance, which have ripened. As they are beginning to open and disclose the seeds, what I want to know is this, do crocuses commonly bear seeds? what is the proper soil and time to sow? and how deep?—A Novice Gardener, *Moss Bank, St. Helen's, Lancashire.*

[The seeding of the crocus is by no means uncommon; indeed, is very frequent. It should be sown soon after it has been gathered, in light soil, in pans or boxes. Cover lightly, and give a little water, and place the boxes in a part of the garden where heavy rain and sun will not have too much power on them. Water occasionally, and when winter sets in, place them in a cold frame. When the leaves appear, abundance of air will be necessary; and as soon as the cold winter is past, remove to the shady spot again. This management must be repeated every year, taking a little of the surface soil away, and adding fresh. The fourth year they may be expected to bloom. In the south of

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England, crocuses are raised by a friend by merely sowing the seed in a south border, and then letting it remain. If our correspondent has a warm corner, he may adopt the same method. Crocuses are generally increased by offsets.—Ed. M. F.]

OPINIONS OF FLOWERS.

J. Chadwick, Leeds.—Your seedling heavy purple picotee will not disgrace the name of Mrs. Chadwick. There is not a shadow of doubt about its being a first-class flower. The petals are good substance, pure white, free from spots or bur in the edges, smooth, and the colouring is that of a bright purple, solid and evenly laid on. Take this variety away from the smoke of Leeds, and grow it in the pure air, and, if I mistake not, it will prove one of the finest heavy purple picotees sent out.—J. Hepworth.

C. S., Berwickshire.—Your seedling pansies are all good; the selfs in particular. Cheviot is a beautiful claret self, of excellent substance and first-rate form; the eye very true, the best we have seen in its way. Gitana, also a self, large and good substance, claret and black shaded; very good. Black Agnes, dense black, with purple shading round the eye, large and beautiful. Marquis of Bowmont, good yellow ground, with very decided margin of crimson maroon; good. 64-60, a good self, of satin-like quality, plum, with bluish eye, very stiff, and good shape. 25-69, an excellent self.—John Dobson.

We regret that owing to a communication from Mr. J. Thurston, Warrington, respecting a box of seedling pinks, being forwarded for our opinion, having unfortunately been mislaid, he will be debarred from introducing them until next year, as he does not wish to send them out without first having received the highest commendation.

WORK TO BE DONE—SEPTEMBER.

Auriculas.—The plants will be now in a growing condition, therefore will require a good deal of attention. Keep all rain off; still look after the green-fly, and keep the plants clean, which will greatly be assisted by the plentiful admission of air.

Cinerarias.—These will now be growing fast; and where plants are required to bloom early, for exhibition or otherwise, they should be assisted in growing now, by repotting as often as the pots get full of roots, as, if they are allowed to get once pot-bound, some difficulty will be experienced to get them to recover as wished. Our plan is, to remove them as often as they require it, giving only a moderate shift each time. The plants, under this system, grow rapidly, and by this means enormous plants may be produced. Much, of course, depends on attention to minor points, such as situation, soil, proper selection of varieties, etc. The plants must never be crowded, and always endeavour to admit as much air as possible to the stem, by pegging down the leaves when crowded. As soon as the stem is an inch high, stop it back, and train out the shoots as they grow. Continue to

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increase such as are required, by putting the cuttings or offshoots round a small pot, and keep close under a handlight till rooted, which will not be very long. Seedlings may be shifted into their blooming-pots, that is, such as have made sufficient progress.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Fuchsias.—See last month.

Pansies.—Occasionally stir up the surface of the beds, and keep clear from weeds. Towards the end of the month, prepare some good soil for potting up those which are to bloom in pots, or any others it may be convenient to winter in frames. They like a good soil, and plenty of drainage. 48-size pots are the best size to winter show-plants in, as they have room to grow, and be pegged out as they grow, till February, when they may receive their final repotting. Cuttings should now be put in pots; they are more likely to strike, and can be wintered more conveniently in frames. Seedlings may be pricked out.—JOHN DOBSON.

Hollyhocks.—Sow seed, if any be ripe, and where the earlier blooming varieties have done flowering, cut them down, in order to induce the stools to emit healthy shoots; the directions for August must still be attended to, especially with regard to watering and the taking off cuttings.

Pelargoniums.—The specimen plants will have made considerable progress, and may be allowed an abundance of air, in order that the shoots may gain strength, and to insure stocky plants. Occasionally, just loosen the top of the soil, and when any shoots are weakly, support them with a stick. Should the plants have broken irregularly, now is the best time to endeavour to make up for any deficiencies, as recommended last month, by stopping any shoots which may be taking the lead of the others. Be careful, if obliged to move the plants about much, that you do not rub the shoots off. The plants should be all housed by the middle of the month. Be careful in supplying them with water, as they will not require a very great deal at this season, unless we get bright, hot days. Push along any young plants you may require for specimens. Cuttings may be potted off as soon as struck, and if necessary pinch the tops out, and keep close for a few days. After they have been potted a fortnight, give plenty of air, and go over them to pick any weeds out, and just loosen the top of the soil. The end of the month is perhaps the best time in the whole year to add varieties to collections, as the plants may be grown to any shape by commencing when they are young. —JOHN DOBSON.

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NEW ROSES, AND ROSE INFORMATION.

ADDRESSED TO ROSE GROWERS.

It is one thing to see a new rose at an exhibition, but it may be quite another thing to see it at home. It is not every rose that you see and admire, that is profitable for you to have. As exhibitors you must, till better roses of the same line of colour come out, retain some that are not, but for purposes of exhibition, worth your while to keep. You see, perhaps, at an exhibition, in the stand of a nurseryman, a rose that you admire, and wish to have; but this syren is but one out of a hundred failures. The important question is this, Is it, for habit and free blooming and hardiness, a rose suitable to your climate, soil, and exposure to wind?

It is impossible in one season, or perhaps two, to decide these points, even when you have got the rose-tree home under your own eye.

This being so, as regards new roses of short acquaintance, I can only speak in some cases with somewhat of reserve. After such a winter and wintry summer, this reserve should be more rigidly observed. To say that any rose has lived is no small compliment. Nothing is more injurious to the roots of roses and strawberries, especially where drainage is not free, than months of continued sunless, wet weather.

Three of the best roses that I have grown, for bloom and beauty, this year, of newer roses, in their line of colour, are Comtesse Chabrillan, Anna Diesbach, and Marie Thièry. They are three beautiful roses. The first is occasionally like W. Griffiths, but not always so. Her first bloom this year was in form like M. Laffey, with edges turned down; her next was like W. Griffiths; and the other five blooms, the first series, were exactly like that of the rose figured in the "Florist." The whole of the seven were perfect in their different forms. Anna Diesbach is a very rich rose colour, and distinct in colour; and, though not an abundant bloomer, she does her work well, and is the freest grower of these three. Her petals are smooth, deep, and first-class. She is not so full as some may wish; but, whether in trebles or singles for exhibition, her presence must tell. M. Thièry is not apparently so growthy as either of the above, but she is stout, a free bloomer, of an infolded and beautiful form, her petals being concave. She is not unlike that beautiful rose, Alphonse Karr. I have had budded many plants of the second, and just bought and planted four more of the first, and two more of the last, be-

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sides having several briars budded here with her. This will show that I am sincere.

In the line of flesh-blush, and sometimes like the Duchesse d'Orleans, is Reine de Danemark, good on both stocks, a most beautiful rose, of great size, and not coarse here, though in rich rose ground I have heard she is so. With regard to "*coarseness*" in a catalogue description, it is one of the greatest recommendations, as our thinner soils will reduce the vulgarity of a rose to sufficient size and refinement. Of course I bar rough edges. Of the line of glowing and rich crimson, I highly recommend for its habit, free blooming, and great beauty, Eugene Appert. Like its parent, my two plants, in this mildewing season, have suffered; but by the application of yellow sulphur I stopped the disease, and one plant is about to bloom a second time. The foliage is very fine. Of the very dark plum line of colour, I like Francis Arago. It came out in wet weather, and appeared to be of the colour of an Orleans plum when the pollen is rubbed off. It is a free bloomer, and bids to be of greater size than new dark roses usually are. Altesse Imperiale is fiery crimson on the interstices, and very dark at the edges, clear black. It was, so far, a very clever little rose. I cannot yet speak of its habit. The former, also, I should like to see another summer over as respects its habit. I have not had a bloom of Maroc, but have had it budded on good briars, and also Eugene Appert, Arago, and other dark novelties. Francis the First, Comte de Beaufort, and Lord Elgin, are very nice dark rich colours; but as regards habit, I must see them another year before I can speak. I have several briars budded with Francis the First, and I may say, that until you get pot roses to two years old, or bud them on strong stocks, and find out what is the proper situation for them in your garden, it is presumptuous to settle their fate. Celine Forestier and Mademoiselle Aristide are two yellow roses, of very strong growth, and I trust will bloom in a few days. Octavie Fontaine is an extremely neat, imbricated, shelly-looking, white Bourbon, of the finest habit of growth; the blooms are smallish. Tea Cornelia (or Cornella) had a fine bud in the way of Solfaterre, but the wet rotted it off. George Peabody, on its own roots (four), is of fine habit, and always in bloom. In wet weather I compared it with Paul Joseph, and it was very like. Some think it like Souchet. I have bought four on Manetti, and had one dozen briars budded with it. This rose, Tea Cornelia, Midland Margaret, Beauty of Greenmount, and Dr. Kane, came to me from Mr. Pentland, of Baltimore, beautifully packed, very hard in wood, and with their eyes ready to burst. They were jammed horizontally, with wedges of wood against the ends of the box, with heads inward towards each other. I have had no

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blooms from Midland Margaret and Dr. Kane. Beauty of Greenmount is a pretty pot rose, small in character, and like Fellenberg The leaves are small and of beautiful dense green, quite distinct. De la Mott, a nicely formed clear crimson, something in the centre like a French aster. Dr. Brettoneau is clear crimson, and dark shaded. Stephanie Beauharnais, marked in one catalogue as flesh, is, as sent to me, of crimson colour, and something like Monsieur Ravel. The following is Eugene Verdier's description of it, as taken from the raiser:—"Fleur moyune, bombeè (raised in the centre), beau rose carminè." I cannot, till after further proof, undertake to recommend these three.

In a word, I can only recommend, for flower and habit, Anna Diesbach, Marie Thiery, Comtesse Cecile Chabrillan, George Peabody, Octavie Fontaine, and Eugene Appert; and as to habit, Celine Forestier and Mademoiselle Aristide.

Isabella is blind again this year; Jane Hardy is clear, nice yellow, but did not open well. After Forestier and Aristide have bloomed, which they will do, if weather is favourable, in a few days, I will communicate my opinion. The above six, I think, would give you satisfaction. Arago probably might be added. Some of my pot plants have been much cut for budding, and of course do not look very flourishing.

I will now speak of new roses that I have seen at exhibitions:—

Triomphe de Lyons I saw at Salisbury, June 28, in Mr. Tiley's pan. It was a fine rose, of dark deep rich crimson, dark shaded, decided and clear in colour, but not so bright as Appert. I have bought four plants of it. I consider this the best dark rose I have seen this year. Its character of formation is not unlike Lion des Combats, but I think it will be a better rose. Louis Quartorze, Princess Imperiale Clothilde, and Victor Verdier, I saw at the Floral Hall. They appeared to be three nice promising roses. I have seen the plants of Victor Verdier and Madame Boll (not in flower), and the habit of the plants appears to be excellent. I shall buy them both.

Clothilde won the silver medal of the first class, at Paris, in June twelvemonth. I thought her like, but rather whiter than Madame Ducher, of which I have lately seen some beautiful blooms, with clear, clean, smooth petals, and nicely cupped, at Mr. Hector's, near Blandford. Admiral Nelson I saw at the nurseries, Blandford, in the spring. It was of the colour of the Duchess of Norfolk, rather lighter, but nicely folded.

I may say, by the wayside, that at the Floral Hall the old roses, Patrizzi and Quintinie, in the dark line, were not eclipsed by anything new. Maroc there was small, but of a fine colour,

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rather gone over. Madame Standish was a pretty little rose, in Standish's pan; and his Eugene Apperts were not in condition. There is no crimson purple rose out yet equal to Marie Portemer. She is the best rose of her year. I have five standards in all heights and in all exposures, besides a dozen budded with her; and to those who like that fine colour I can highly recommend her.

I had one in my second prize twelve-box at Salisbury, yesterday, which Mr. J. Keynes pronounced to be the best rose in the tent. The public also found her out, and also my beautiful specimens of Triomphe de Rennes. I had these two roses, also, in a collection of eighty roses, and in two twelve-boxes, and no doubt they helped me also to an extra prize for the collection, which seemed to draw a great number of spectators and admirers. The exhibition was held at Wilton House, the seat of the Right Hon. Sidney Herbert, and several thousand persons came by special trains from all parts, and two bands attended.

I will now close with the following amusing anecdote relative to these two last roses, of which you cannot have too many. Rennes is rather best against a south wall; in fact, all yellow roses like it:—

I was standing by my roses, which, with Mr. Keynes's splendid twenty-four trebles, and also twenty-four noble singles, were the only large number of roses belonging to one individual. After a time, a little burly man came up to me, as I was muffled up with a blue silk handkerchief and a white blanket coat, to protect my very stiff neck from the piercing easterly wind. He accosted me thus:—"That's the two best roses I ever saw; what's the names? what's the price? and when do you send out?" I instantly *twigged* he takes me for a nurseryman. I will have a bit of fun. "Why, sir," said I, "you have a good eye." "Oh," said he, "I am an old rosarian; I have seventy sorts, and I would rather have that rose (Marie Portemer) than all of them" "Good, sir," said I, "very few people know her value, or that of Triomphe de Rennes." "Well, well," said he, "let's come to business. What's the price?" "Why, sir," said I, "I could not send out those two roses under half a guinea each." "And cheap, too," said he; "and I'll have 'em." "What direction," said I, "am I to send them to?" "Oh, direct 'em to 'G. E., Beehive Potshop, Four Posts, near S——n.'" "Very good, sir, the order shall be executed when the wood is ripe." Now came the puzzler. "Stop," said he, "I must take your name and direction." And out he took a memorandum-book and pencil, and wrote down, at my dictation, "The Rev. W. F. Radclyffe, Rector of Tarrant, Rushton, Dorset;" and adding, "he will faithfully execute your order on

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the fall, and beg your acceptance of the two trees." Before this was done my blanket coat was off, my blue silk removed, and, amidst great apologies, I stood up in the presence of "G. E., Beehive Hotel" (he now called it), in a white neckcloth and black clothes. Apologies were accepted, we shook hands, I was invited to the Beehive, we are friends for life, and the order shall be executed. W. F. RADCLYFFE.

Rushton, Sept. 7, 1860.

THE TULIPS AND THE NATIONAL.

(*Continued from page* 286.)

KING (Delaforce).—A third-row flamed bizarre; a fine variety. Exhibited 1859, 1.

KOSCIUSKO.—A feathered byblœmen. Exhibited 1856, 1.

LA BIEN-AMIE.—Exhibited 1859, 1.

LA CHESIS.—A fine flamed rose. A first-row flower. Exhibited 1857, 1.

LADY EXETER.—A second-row byblœmen. Exhibited 1859, 1.

LADY STANLEY.—A third-row byblœmen, raised by Mr. Lawrence. Exhibited 1857, 1.

LALLA ROOKH.—Although this is an old variety, it is but little known. There are several different flowers under this name; the true one is pure and very prettily marked. A second-row byblœmen. Exhibited 1857, 1.

LA TENDRESSE.—Exhibited 1859, 1.

LAVINIA (Clarke).—I have seen this flower (although always classed as a first-row rose) so dark as to pass for a byblœmen. It may therefore be classed as a dark rose. It is light in feather and flame, is worthy of a place, and frequently excellent flowers are exhibited. Exhibited 1856, 1.

LEONORA.—A fine fourth-row rose. The petal is good, colour light carmine, form perfect. You are slightly wrong in stating it to be narrow. One of Mr. Headly's new seedlings. Exhibited 1860, 1.

LORD HARDINGE.—A fine bizarre, raised by Mr. Groom. Exhibited 1857, 1.

LORD LILFORD.—A fine third-row bizarre. Exhibited 1860, 1.

LORENZO.—A first-class flower. Known also as Mrs. Lymberry and Duke of Orleans. It is a third-row flower, fine feather and flame. Exhibited 1859, 1.

LOUIS PHILLIPE (Delaforce).—A second-row, fine redding brown. Flame only, or no feather, fine form, pure. Exhibited 1859, 1.

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MADONNA.—A byblœmen of ordinary qualities. Exhibited 1859, 1.

MAJOR BEAUCLERC.—A byblœmen. Exhibited 1860, 1.

MARCELLUS.—Exhibited 1859, 1.

MARSHAL BLUCHER.—A flamed byblœmen. Exhibited 1856, 1.

MARY JANE.—Is a good light feathered byblœmen, and is perfectly described by you in a recent number. Exhibited 1860, 1.

MARY CHAWORTH.—One of Mr. Slater's flowers. It is a fine feathered rose, of good form and colour. Exhibited 1860, 1.

MAYOR OF MANCHESTER.—Exhibited 1850, 1.

MISS ADA.—A good feathered rose, well marked, and makes an excellent flower for the pan. Mr. Turner describes it as a bright rich new feathered rose in the style of Heroine, but with a narrower feather. Exhibited 1857, 1.

MIDLAND BEAUTY.—A feathered byblœmen. This and the variety known in the Midlands as Rose of Sharon are identical—the latter is the original cognomen. Exhibited 1856, 1.

MISS GRACE.—Exhibited 1859, 1.

MISS PORTER.—A byblœmen. As I saw it I thought it pure, but Mr. Slater says, "a flamed byblœmen, *greasy* base, colour dark, and marks well." The only fault I saw in it was its length of cup. Any one possessing Miss Groom need not desire Miss Porter—the one is a little lighter than the other, and that is all. Exhibited 1857, 1.

MRS. BOWLES.—No notes; but I believe is one of Mr. Norman's flowers. Exhibited 1858, 1.

MRS. CRESWELL.—Another seedling of the Rev. S. Creswell's. Mr. Allestree justly describes it in the "Midland Florist" as quite pure, good shape, colour too much run down in the inner petals, evidently a first-rate variety, but not a good break. Exhibited 1858, 1.

MOUNTAIN SYLPH.—A moderate flamed rose. Exhibited 1859, 1.

NAPOLEON.—This is a first-class rose, a good scarlet on a fine white ground, and perfectly pure. Mr. Walker describes a Napoleon (Goldham's), second row, rich plum colour, feather and flame pure white, fine form, rather early. Query: Are they different? Exhibited 1860, 1.

OMAR PACHA.—Is a flamed bizarre, and I have seen it good; it is, however, sometimes defective in marking. Exhibited 1857, 1.

ORPHEUS.—Described by Mr. Walker as a second row, large globular cup, rather loose, dullish brown feather and flame on a pale yellow ground, the markings at times confused. Exhibited 1859, 1.

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PHŒNIX.—No notes. Exhibited 1856, 1.

POMPE FUNEBRE.—At one time quite famous, but now, according to its deserts, nearly gone out. It is an effective flower, but for shape and purity must be avoided. Exhibited 1857, 1.

POLYDORA.—No notes. Exhibited 1856, 1.

PREMIER.—No notes. Exhibited 1860, 1.

PRINCESS MAUD.—No notes. Exhibited 1856, 1.

QUEEN OF HAMPTON.—Exhibited 1859, 1.

QUEEN OF SHERWOOD.—A flower of Mr. Battersby's, and a fine flower too—very pure, nicely feathered with dark purple, good form. Mr. Allestree says, "It has a fine Polyphemus shaped cup, with a medium feather of dark purple. Mr. Walker, who knows the flower well, says, "In her usual fine style. A seedling from Louis XVI., which it is declared to supersede. It is of exquisite purity, and good form, with rich pencilled feather. A real gem." Exhibited 1857, 1.

QUEEN OF THE SOUTH.—A fine feathered byblœmen possessing first-class qualities. Exhibited 1860, 1.

REMBRANDT.—A feathered bizarre. Exhibited 1856, 1.

REINE DE SHEBA.—[A very neat, thick-petalled byblœmen with good white, pure bottom, generally well flowered and feathered outside. A second-row flower, rather of the smaller kind. The purple is rather light, the markings generally perfect, or nearly so. The form, though not first-rate, is above the average of the old flowers.] Exhibited 1856, 1.

ROSA BONHEUR.—A fine feathered byblœmen, good cup, and pure. Exhibited 1858, 1.

ROSA BLANCA.—A fourth-row rose. Mr. Allestree describes this as fine shaped. When first expanded a rose, but changes to a byblœmen—a very early variety. [A very singular difference may be seen in two strains of this beautiful flower; one is beautifully and regularly feathered, and without any flame, the other is richly feathered and flamed, and is desirable in both states. It has been said there are two different kinds, but the sport we have mentioned is the same flower in two different characters, and anybody who grows the feathered kind will find in time that they will obtain the other, though the feathered and flamed kind never to our knowledge came back to the lighter character. The form of the flower is pretty, and it is a showy subject in a bed. There are two objections made to it by some persons, but it will always be grown in spite of them: first, it blooms too early for the rest of the bed, and second, after it has been out some days, its beautiful rose colour goes off to a light purple, and so distinct as to enable a stranger to pronounce one a byblœmen, and the other a rose. It is a good third, and occasionally used as a fourth-row

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flower, but is very apt to split and form two roots instead of blooming, on which account many use two bulbs in the same hole.] Exhibited 1856, 1.

Rose Celestial.—I am rather at a loss here, for I fancy I have seen two distinct flowers. A splendid flower of this name, however, was let out two or three years ago; and as I find it has been exhibited for more than five years, I have supposed it to be the same. My notes, however, said Rose Celestial (Walker); perhaps some kind friend who knows the two varieties will explain. Barlow's Rose Celestial is described by Dr. Hardy as "A splendid variety, exceedingly pure, and when better known is sure to be in great demand. It is a perfect gem." Mr. Barlow says, "It is very distinct, pure, a splendid marker, and of good form, being shorter in the cup and rounder on the top of the petals than Aglaia, or Triomphe Royale. Its colours are very pure, and it stands a long time in bloom. The quality is sufficiently attested by its winnings on the best stages in Lancashire." Exhibited 1856, 1.

Rose Imperial.—A feathered flower of average qualities. Exhibited 1856, 1.

Rose Lac.—A feathered and flamed rose of the second row. It is one of those flowers of Dutch extraction, and singularly enough, although it has now been cultivated for sixty-five years, its price is £2. It is perfectly pure, feather light, and beam narrow, of rich rosy scarlet, splendidly contrasted. Exhibited 1856, 1.

Rose Magnificent, or as it is better known as simply Magnificent.—Mr. Allestree describes this as "very creamy, and the marking plaited, or destitute of those delicate pencillings which contribute so much to the beauty of the tulip. It is a second row flower. Exhibited 1857, 1.

Rose Surprising.—Comes frequently stained. Exhibited 1858, 1.

Rose Trial.—Exhibited 1860, 1.

Royal George.—No notes. Exhibited 1856, 1.

Sarah.—There are no less than three flowers under this name; this, however, is, I believe, a tea rose. Exhibited 1857, 1.

Sampson.—No notes. Exhibited 1856, 1.

Sappho.—No notes. Exhibited 1856, 1.

Sir C. Napier.—Justly described at page 180. Exhibited 1860, 1.

Sir Sidney Smith.—Very like, if not the same as Magnum Bonum. Exhibited 1857, 1.

Surpasse Catafalque.—A bizarre much esteemed in the north. Exhibited 1859, 1.

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SURPASSE LE GRAND.—A fourth-row byblœmen. Exhibited 1857, 1.

SYLVIA.—No notes. Exhibited 1856, 1.

TERENCE.—A seedling, I believe, of Mr. Steward's. Exhibited 1860, 1.

TRIOMPHE DU MOND.—No notes. Exhibited 1859, 1.

TRUTH, generally termed BROMLEY'S TRUTH.—Exhibited 1858, 1.

VIOLET BLONDEAU.—A second-row byblœmen. Exhibited 1856, 1.

VIOLET BRUN.—Exhibited 1857, 1.

VICTOR EMMANUEL.—A fine seedling rose of first-class properties, raised by J. Hunt, Esq., High Wycombe. This variety received a first-class certificate at this exhibition. Exhibited 1860, 1.

VIOLET ROUQUETTE.—A byblœmen, and, I believe, a second-row flower. Exhibited 1860, 1.

WALWORTH.—A rose, both feathered and flamed. Exhibited 1860, 1.

EXHIBITION FLOWERS.

No. III.—THE PINK.

BY THE EDITOR.

IN giving a short article on the cultivation of the pink, which for many years has been the favourite flower with the working men, especially, of Lancashire, I do so at the request of numerous of our readers.

Without entering into the subject as to whether the carnation, the picotee, and the pink are the same thing, exhibited under different sports, as is held to be the case with several of the writers of this and the last century, I would, in the present paper, merely treat of its cultivation; and for this purpose would divide the subject into soil, propagation, general directions, and a list of the most approved varieties.

I. SOIL.—The Lancashire compost, in which I have seen some remarkably fine flowers grown, is merely two-thirds well-rotted turf from an old pasture, added to which is one-third of thoroughly decomposed cow-dung. This is the general compost, although half-rotted leaves and half-rotted manure is used. The compost recommended in a paper read before the Horticultural Society of London, consists of a sandy loam, or rather a commixture of yellowish loam, common black garden-mould, road-grit, washed before it is used, and a considerable portion of rotten horse-dung

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well incorporated with a good bottom of dung from the cucumber pits. Before using fresh-dug loam strew over it a little quicklime, well slacked and in a hot state, to correct any acidity or decompose any injurious saline compounds. Lime is also an excellent application for the destruction of slugs, snails, worms, and injurious insects, as well as for the dissolution of inert vegetable matter. The bed should be similar to a tulip-bed, boarded round and round, and raised about three or four inches above the path. A great and essential point is to have it drained; and this can only be done (here I refer to clayey soils) by securing a proper outlet for the water, and not merely by digging a hole and throwing in a certain amount of stones and brick rubbish, and then filling in with earth. The most suitable time for forming a fresh bed is the end of the present month or the beginning of October.

II. Propagation.—The most common ways of propagating are by seed and cuttings or pipings. The best time for sowing is in March or April, in pots, or, better still, in pans; use a good compost, and having made the surface flat and smooth, sow the seed evenly, covering over with soil to the depth of a quarter of an inch. The boxes may then be placed in a cold frame; plenty of air, little water, and protection from intense frost will be required, and ere long the seeds will have germinated, and in July they will have made such progress as will allow of their being planted in the seedling bed, where, in all probability, they will bloom the following season. In taking pipings the time selected should be immediately after the season of blooming. A bed prepared in a shady situation is most applicable, and should consist of nice light sandy loam, made extremely smooth. This may with advantage be watered a few hours before the cuttings or pipings are put in. In preparing the pipings they should be cut, not merely disjointed, as is too commonly the case; for this purpose a sharp knife is requisite. Strip off the leaves carefully, and trim off close to the joint, avoiding cutting into it. The tops of the leaves are frequently removed; but experience has taught me that this is not so good, and I would therefore recommend that they be left untouched. Plant in a circle, and cover over with a hand-glass, giving air immediately you have reason to think that they have struck root. The method of striking in heat I cannot recommend to amateurs, there being such danger of the plants becoming weakly. When planting season arrives, they may be planted in beds as directed. Pipings should be struck every year; one-year-old plants always produce the best flowers; the old plants, however, come in admirably.

III. General Management.—October is, perhaps, the best time for planting, which should be done moderately firm. They

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should be all labelled; if by numbers, a careful registry may be kept. In November a little protection will be generally found serviceable; this may consist of a few boughs. Undoubtedly the pink is hardy, and protection against wind is the essential point. Through December see your plants properly tied, and that they are not blown out. In January the plants should be carefully looked over, and all decayed foliage cleared away; and if the season is tolerably dry, the soil may be pressed round the roots. February's work must be to again go over the plants to fix the loose ones; but do not do this when the soil is wet. Nothing I find more fatal than the pressing of wet mould round the stems. The surface may be stirred, and a slight top-dressing of rich mould may be applied. In March examine your plants, and if not already top-dressed, you may do so with a little well-rotted manure. Should the season be forward, you may with advantage fill up vacancies; but don't break the roots more than you can possibly help; all straggling shoots should be tied. Towards the latter end of April any side shoots which are not required may be taken off. May is an important time in thinning out the spindles or blooming stems; much depends on the constitution of the plant as to the number left. Take, for instance, Colchester Cardinal, a strong plant of which should never bear more than two stems; yet a plant of Great Britain, in a fair state, would well carry four or five. Liquid manure may be applied. June will require again thinning, and this must be done according to the variety. A few hints on this, carding, and exhibiting, and seed-sowing, will form a future paper. Propagating will follow, and this will occupy the grower during July and August. Pipings may be greatly forwarded and strengthened by being placed in a bed before being planted out, which may be done at the latter end of August.

IV. VARIETIES.—Although I cannot boast of having seen many novelties during the last two years, I can with confidence give the following notes of those which I have taken for several seasons past:—

Purple, or Dark-laced.—Auckland's Mary, John o' Gaunt, Huntsman, Mango, Beauty of Rochdale, Pilot, Greensides, Duke of St. Alban's, Black-eyed Susan, Coronation, Victory, Beauty of Deighton, Leeds, Guido, Buckley's Glory.

Red-laced.—Joseph Sturge, Gipsy Queen, Stockwell, Royal Visit, Dan O'Rourke, Anna Maria, Lord Raglan, Mary Ellen, Susannah, Adam Smith, Mrs. Norman, Napoleon.

Black and White.—Miss Jessop, Lady Boldhoughton, Mrs. Sarah, Kaye's Mary, Beauty of Blackburn, Snowball, Mrs. Bradley, Black-eyed Susan, Beauty of Home, Lady Frost, Virgin Queen.

August 20, 1860.

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NATIONAL HOLLYHOCK EXHIBITION.

THE first National exhibition of this flower was held at the Crystal Palace, on Sept. 1st, 1860. The season had by no means assisted the development of the flower; still there were numerous specimens. Few persons, comparatively speaking, grow the hollyhock; they get the mistaken notion that it is totally unadapted to anything less than a park or the pleasure-grounds of a mansion. Quite a mistake. We have ourselves, for some years, grown them, and that, too, in a garden of no very large dimensions; and we doubt if there were anything more attractive than our hollyhock bed. To grow for show and to grow for ornament are two things quite distinct; and when grown in a small garden, we would not advocate shading.

The great improvement made in shape, colour, and form is mainly attributable to the late Mr. Charles Baron—a man who, for many years, worked with untiring zeal and energy to promote a race almost new. This man, whom every cultivator of the hollyhock will always remember, did this in a small plot of land, and presents a laudable example for others to follow. From a poor single-flowering flower he raised a race worthy of the attention of the florist, and the foundation of those graceful pillars of bloom so universally admired.

That the hollyhock is a flower suitable for a National exhibition there is but little doubt. The great amount of cold and wet which we have experienced made us almost surprised that there were any exhibitors at all; and, if the number of exhibitors was not quite so large as was expected, still we hope that next season we shall have such an exhibition at the Palace as shall answer every expectation. The committee of the Crystal Palace deserve every commendation for the excellent arrangements, and for the liberal prizes which were awarded. The exhibition was originally fixed for an earlier date, but was postponed on account of the season.

The following were the awards:—

NURSERYMEN.

Best Fifty Spikes.—First, Mr. W. Chater, Saffron Walden: Empress Improved (fawn), Walden Gem (ruby crimson), Vesper Bell (marbled), Hope, Memnon (bright light crimson, very fine), Excelsior Seedling (yellow), Mary Ann (a fine seedling of Mr. Chater's, colour peach), Seedling Erecta, Col. Howard Vyse (Bragg), Mont Blanc (pure white), Lord Loughborough, Lucidum (a magnificent flower, of a light yellow colour, fine form, and evidently one of the best), Mrs. Chater (fine form and colour), Leonora, Agnes (a fine seedling), Seedling (salmon), Empress Improved, Black Knight (very deep black), Discolor (fine), Vesta (fine bright pink), Venus, Mignonette, Admiration, Climax (a splendid-shaped flower), Monarch (also very fine), Plutarch (plum colour, good form and spike), White Globe (fine white), Sir W. Middle-

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ton (large buff, shaded, a handsome spike), Lucretia, Shrubland Gem (fine yellow, good, perhaps the best yellow hollyhock we have seen), Hon. Mrs. Ashley (lilac peach, fine spike, an old variety, but still very fine), Seedling, Dulcis, Tyrian Prince (a fine dark purple, of excellent shape), Miss Nightingale (primrose), Miss Ashley (fawn), Jeannie, Walden Masterpiece (lemon and pink, a magnificent flower), Seedling Negro, Alba Magna, Lady Middleton (rosy crimson, fine), Empress Improved, Discolor, Euphemia (fine), Grandis Dulcis. Second, Messrs. Paul and Son, Cheshunt, in whose collection were Purple Prince (very fine purple, large), Hope, Lizzy Roberts (white, very fine), Beauty of Cheshunt (light rosy colour, very fine), Hon. Mrs. Ashley, Amarantha, Memnon (Paul, very fine), Beauty of Walden. There were also a number of fine seedlings of Messrs. Paul's.

Eleven Spikes.—First, Mr. Chater: Leonice (Roake, crimson), Fearless (fawn), Walden Gem, Lizzy Roberts, Mrs. Chater, Tyrian Prince, Excelsior, Negro, Phillis, Seedling (blush).

Nine Spikes.—First, Messrs. Paul: Rosy Morn (bright rose, fine), Memnon, Butterfly (Paul, fine cream), Purple Prince (fine, good shape), Seedling, Ossian, Paul (crimson, shaded with salmon), Dulcis, In Memoriam. Second, Mr. W. Bragg, Star Nursery, Slough.

Forty-eight Cut Blooms—First, Mr. Chater: Leonora, Mary Ann, Lucy, Countess Jane Somers, Marguerite, Mont Blanc, General Havelock, Mrs. Chater, Ossian, Black Knight, Queen of Whites, Harriett, Walden Gem, Ophinia, Monarch, President, Purple Perfection, President, Memnon, In Memoriam, Discolor, Sir W. Middleton, Lucidum, Alba Magna, Negro, General Havelock, Ceres, Loveliness, Sylvia, Golconda, Lucretia, Black Knight, General Havelock, Seedling, Tyrian Prince, Satirist, Neptune, Mary Ann, Negro, Queen of Whites, Prince Albert, Purple Perfection, Seedling, Ophinia, Mrs. Chater, Discolor, Excelsior, Harriet, Mrs. Roake, Memnon. Second, Messrs. Paul: General Havelock, Seedling, Plutarch, Ceres, General Havelock, El Dorado, Lord Loughborough, ditto, Empress, ditto, Beauty of Walden, Seedling, Dulcis, Purple Perfection, Lizzy Roberts, Flora, Leonice, ditto, Butterfly, ditto, Red Rover, Hope, ditto, Beauty of Minden ditto, Sir D. Baird, ditto, Beauty of Cheshunt, Lemonade, Ambrosia, Rosy Gem, Mrs. Ashley, ditto, Memnon, ditto, Amarantha, ditto, Alice, In Memoriam, Fearless, Lady Franklin.

Twenty-four Blooms.—First, Mr. Bragg, Star Nursery.

Amateurs.

Letter A.—*Nine Spikes*—First, Rev. S. W. King, Saxlingham: Hon. Mrs. Ashley, Norma (seedling), Red Gauntlet (seedling), Mary Stuart, Memnon, Seedling, Rob Roy, Queen of Buffs. This was a very nice collection. Second, Mr. W. Plested, Elsenham, the best spikes of which were Hon. Mrs. Ashley and Lady C. Neville.

Letter B.—*Seven Spikes*—First, Mr. Thomas Roake.

Letter C.—*Five Spikes*—First, Mr. A. Chater, with Hon. Mrs. Ashley, Queen of Whites, Beauty of Cheshunt, Masterpiece (Chater).

Letter D.—*Twenty-four Blooms*—First, Rev. S. W. King: Seedling, Rose Bradwardine, Walden Masterpiece (fine), Autocrat, Pourpre de Tyre, Memnon, Mrs. Ashley, Seedling, Mrs. Oakes (fine), Queen of Buffs, Prince Charlie (seedling, fine), Minna (fine), Prince Charlie, Rose Bradwardine, Seedling, Walden Masterpiece, Queen of Buffs, Mrs. Ashley, Memnon, Seedling, Purple Perfection, Mrs. Oakes, and Queen of Buffs. Second, Mr. W. Plested, Elsenham.

Letter E.—*Twelve Blooms*—Mr. T. Roake, of Clewer, the best blooms in which were Memnon, Lily, Reine Blanche.

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First-class certificates were awarded to Mr. Chater for Prince Albert, and to Mr. Bragg for Lord Taunton. A fine collection of roses was shown from Mr. Paul. Annie de Diesbach, Queen of Denmark, Louis Peyronny, Dr. Lapreste, Mathurin Regnier, and Comtesse de Chabrillan, attracted universal admiration. Mr. Smith, of Islington Nursery, had a nice pan of verbenas, among which were Spitfire, Purple Standard, General Simpson, Mrs. Holford, Mrs. Maclean, Mrs. Shepherd, Geant des Batailles, and Red Rover. J. C.

GROWTH OF TULIPS IN BAGS.

Mr. Editor,—In perusing your volume for the year 1858, I find in the September number an article on tulips, emanating from Mr. Allestree, respecting the keeping of bulbs. It appears that he had two or three roots left out of ground all the year, and they were in a good state of preservation; so much so, that he intended leaving more out the next year, by way of experiment, at the same time expressing his opinion that they would do well; but we had our doubts at the time, as we have now. And as Mr. Allestree has never solved the question, we are still left in the lurch.

Still hoping we may gain the required information, and, by way of rendering our aid and assistance, we would recommend a few first-class growers to try the experiment on the following bulbs, namely (one of each):—Camuse de Croix, Louis the Sixteenth, Rose Lac, Strang's King, Adonis, Brulante Ecletante, Fleur de Marie, Pomp Funebre, Superb et Noir, Slater's Masterpiece, feathered strain of Violet Alexandre, and Sanspareil Willison; and if these should turn out well for the following season, and the same quantity of offsets be produced, it may be the means of saving a great deal of trouble. W. M. B.

Maidstone Place, Hackney Road, London.

[Our friend seems only to have read the September number. Had he gone on to page 358 of the same volume, he would have found some excellent remarks from the pen of Mr. Slater. A better authority on the physiology of the tulip does not exist. Mr. S. tells us that the bulbs are of two sorts, either with four or five coats of skin. Those with four coats do not bloom; those with five do. The germ absorbs the juices of the skin next to it, and then the one next to that, gradually increasing until this germ is itself a bulb, and takes the place of the old one. The same process goes on in boxes or bags as in the earth, but only in blooming roots. The offsets will all die. "The natural conclusion

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from all this is," says Mr. Slater, "that the tulip dying annually reproduces its like; and, whether in soil-bags or boxes, Nature will have her own way; the only difference being, that not having derived any nourishment from foliage (for they neither make roots nor foliage in boxes that I can perceive), the bulbs are not so large as those grown in soil, but that they are quite as healthy I have this season again proved with a few implanted in bags." Our correspondent must not suppose that the whole of the stock are blooming roots, and therefore all the offsets, if subjected to this trouble-saving method, would be lost. One of the great incentives to tulip-growing is to see the bloom; and we don't think he or any one else having a stock would let them lie idle in bags. Commercially speaking, it also would not pay; because, as Mr. Slater says, "they are not so large;" and although large-sized bulbs are not always the best, good-sized ones always give more satisfaction. We shall be happy to hear from any friend who has had experience.—Ed. M. F.]

NEW PLANTS.

Caladium bicolor Neumanii.—In proportion as the cultivation of plants peculiar for coloured foliage increases in favour with the public, so it would appear do their varieties, and among the more beautiful of them will rank numerous Arodeæ. Ventenat described what is assuredly the normal state of this species of Caladium, that indeed on which the genus itself is founded, *bicolor*, peculiar in the rich red colour of the disc of the leaf, and running up, as it were, along the principal vein, and disappearing at some little distance from the margin. Here, in a plant no way differing specifically, we have the seed collected in spots of unequal sizes and forms over the whole disc of the leaf, but never touching the margin, and these spots all of a deep rose-red, freckled and margined with white. It is a plant that loves heat and plenty of moisture, and the offsets should be frequently removed. Indeed, it succeeds best in a warm stove, with the pots standing in a pan of water.—Hooker.

Rosa Sericea.—Silky-leaved rose. A white-flowered, usually tetrapetalous rose of Himalaya, first detected by Dr. Wallich at Gossamthem, but since found abundantly in Northern India. Dr. Lindley speaks of it as a rose which, together with macrophylla, found in the same district, exhibits the nearest approach, among India roses, to those of Europe. Introduced by Dr. Hooker and Mr. Strachey into our gardens, where it proves itself perfectly hardy, and is best treated by nailing against a wall: thus situated its blossoms are abundant in early summer.—Hooker.

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BULBS FOR FLOWER-GARDEN DECORATION.

WITHOUT their use, a flower-garden must always look sombre and bare in the spring months. The present system of bedding has considerably interfered with the culture of bulbs; but with a little extra attention, the beds may be made showy from the time vegetation commences in the spring. For instance, in a symmetrical or angle-bedded flower-garden, where a good show of bedding plants is desired with the smallest amount of trouble, a fine effect at a distance will be produced by having a nice batch of bulbs—crocus, tulips, hyacinths, scillas, etc., placed at the corners. The beds may then be rough dug in the winter, in the usual way, for the advantage of the regular bedding plants; and filling the corners will give a pleasing appearance to the whole group in the spring. These bulbs, in most cases, may remain for several years in the same place; in fact, just so long that they may not get too deep, like an oxalis, or be thrown out of the ground like a crocus, accordingly as the new bulbs are formed below or above the old ones. The beds may be levelled and planted just as if no bulbs were there; and by the time that the bedding plants are spreading freely, the foliage of the bulbs will be decayed and out of sight. Of course such corners in oval rim or ridge planting, though giving a lively appearance to the parterre, are not to be compared to a whole parterre filled throughout with shaded and contrasted colours. But our practice and observation would lead us to adopt the cornering or edging system in preference to planting in beds, if full justice could not be given to both bulbs and bedding plants: it may be inferred from this, that the bedding plants will do well in summer and autumn, and the bulbs also receive no injury from late planting, or the bedding plants being inserted among their decaying foliage in May. We have seen many beds so managed, but very rarely with much satisfaction for the whole of the season: making a hole with a trowel in a hard-crusted bulb bed, and there placing a bedding plant, is not the best way to make that plant root vigorously and blow freely; and the bulbs are apt to be blamed, when we ought to censure our own carelessness or want of thought. A few beds well managed will confer more credit on the cultivator than many beds in a slovenly condition. Allowing, then, that full beds look better, when well done, than mere cornering or dotting, how various and beautiful are the combinations that may thus be easily formed. Here, for instance, is a little group of clumps just under the parlour-window; the group being of a circular form, one round bed in the centre and six round it, branching out

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like the spokes of a wheel; plant the centre with the Queen Victoria crocus, a lovely white, about two inches apart in the rows, and six inches from row to row, and then have two beds opposite with purple, two with yellow, and two with blue, and how nicely they will look! Or, if preferred, border the white centre with purple, the blues with yellow or variegated, and the purples with white; or the colours may be shaded in each bed; perhaps there may be only one circular bed near the house that can be devoted to crocus, perhaps nine or ten feet in diameter; this would look extremely elegant if filled with concentric rings of all the different shades of colour, white relieved with purple, purple with yellow, and edge with blue on the contrasting system, varying the edging according as the kerb or path round the bed is of a cold or a warm colour. If the shading of colours is preferred, the result will equally show that there has been thought and design in the planting: but there is no end to the modes in which even a single bed may be planted: we lately recommended a young lady to plant a somewhat larger, rather oval bed with crocus in the lover's-knot style; and she told us that the effect was charming; the broadish bands of the knot were yellow, the enclosed spaces in the centre purple, the space round the bands was blue, and the striped and white finished the edgings. We have instanced crocus as being so easily managed; but the same artistic arrangements may be as easily effected with tulips of the early-blooming kinds, narcissus, hyacinths, etc. In all such cases we would prefer planting as advised under each division, and lifting every year, but so as to secure the ripening of the bulbs: we will shortly state how this may be done, and yet not interfere with a preparation of the beds for bedding plants. In favourable seasons the beds of summer things will keep good until the end of October; then the beds are to be cleared; and if the bulbs are to have justice, the ground ought to be dug, aërated, and suitably prepared. Some bulbs would suffer from being out of the ground so long; therefore secure a small space behind a fence or any such place, and plant all the bulbs rather thickly in sandy leaf-mould on a hard bottom; from this they may be removed in October, November, and onwards, and planted in nicely-prepared soil on a quiet, dull day. So much for the autumn preparation so as to give justice at planting-time to the bulbs.

Such early-blooming things as snowdrops, crocus, scillas, and the earliest tulips, will have pretty well ripened their buds by the beginning of May, and therefore may be carefully lifted and placed in the reserve garden, and watered a little before the leaves quite decay: even the early tulips, all the later and double kinds, and the best of the hyacinths and narcissus, would receive more juice

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if they were planted in pots early in autumn, and plunged in pots when the beds were ready for them; and then, as soon as the flowering was over, the pots could all be taken up and plunged again in the reserved ground until the foliage decayed; and the beds could thus be properly forked and aërated and prepared for the bedding plants. The pots, thus once obtained, would last with ordinary care for many years, and the cultivator would have the satisfaction of feeling that he did everything that he could do to promote the healthy growth alike of bulbs and bedding plants. Unless in late summers, hyacinths suffer but little when lifted carefully out of the ground, and planted and watered, and, if required, shaded afterwards; but the labour and care would be lessened if the bulbs were in pots. Tulips need this potting much (if they must be moved when done flowering, to give justice to the bedding plants), as they suffer much for the future if a check is given to the foliage before it begins to decay naturally.—CARTER'S *Vade Mecum*.

LAYING OUT AND PLANTING.

BY THE EDITOR.

SIX weeks ago we received from an amateur a long, very long letter, asking our advice and soliciting our insertion, in an early number, of an article on landscape gardening. So far as writing an article on landscape gardening is concerned, we must decline, because not only would such an article be unsuited to our pages, but we have really had so little experience in the matter, that we at once would acknowledge our inability. Nevertheless, a few remarks will not only be seasonable, but we hope may also prove instructive.

At the present time the introduction of grass into our English gardens has become so general, that we have no need to advocate its use. A well-kept lawn, even though small, is a source of great pleasure at all seasons. In winter, except when hidden by snow, its evergreen is always grateful. In spring few sights equal its fresh verdure. In summer, although the midday sun may scorch and dry it up, it is still grateful; while in the autumn, when all the other beauties fade and gradually pass away, we have in a well-kept lawn a field of beauty—a never-fading picture. Some persons are, however, absurd enough to think that a lawn requires but little care, and, because they do not devote that care and attention which the subject demands, lose most of its beauty. A lawn, contrary to the often expressed opinion, must not be planted on the *poorest soil*. Not that we are advocates of

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the other extreme, which would render it a mere mass of gross vegetation; and although we do not quite agree with the following advice on the subject by an American author, still there is in it much of truth. A good lawn is never found ready made; it is a work of art. "If the soil is stiff and wet, it should be drained, for in such ground sorrel and mosses will soon outroot the finer grasses, and trees and shrubs will lead only a miserable existence. Draining should be followed by a thorough breaking up of the soil two feet in depth. The chief reason why so many lawns turn brown in summer is, that the ground is so poor and shallow. Trench and enrich it, and the grass will flourish in unchanging green. It is not enough to manure the surface. That may cause the grass to start vigorous in the spring, but will not insure its freshness throughout the summer. Make the soil deep and moderately fertile through its whole depth, and it will furnish a fine thick sward, patiently enduring the heat of the dog-star and the withholding of the latter rain."

Another point of advice is with regard to evergreens. Undoubtedly there are few countries which possess so few indigenous evergreens as England. Still, thanks to the enterprise of our Government, our horticultural societies, and last, though by no means the least, our private cultivators, we have gathered from north, south, east, and west, until at last we possess collections unequalled. The number, at the present time, which may be said to be acclimatized we believe exceeds one hundred and ten. Although we amateurs do not possess the space of an Elvaston or the pocket of an earl, still we may surely spare some little portion of our Edens for the growth of subjects which render to the long months of winter and early spring so much verdure and beauty. Our lawns will be greatly improved by a judicious planting of evergreens at intervals. Our spring flowers will be increased in beauty by the addition of a few graceful arbor-vitæs, or the wavy juniper, by the graceful deodar, or the more lively acuba. All are suitable, besides a great many others; and now that the season of planting is approaching, we would advise even the possessors of the smallest gardens to plant a fair proportion.

Before closing this article we would say a few words of advice. In laying out, don't attempt too much. Remember that with a perch of land you cannot vie with your neighbour who has a rood, or with a rood you cannot excel the proprietor of an acre; *but also remember* that, by judicious arrangement, your perch or your rood may be quite as satisfactorily laid out. Simplicity of design is a main point. Don't attempt more than you have the means of carrying out. Highly ornamental work, which is necessarily expensive, whether applied to buildings or to grounds, can be

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properly performed only by the wealthy; for any attempt that falls short of the grandeur and elegance of the model comes under the head of pretence, and is ridiculous just in proportion to the distance between the model and the imitation. The science of landscape should inculcate such principles as, if generally understood, would cause the people to prefer the successful copy of pleasing mediocrity, to a vain attempt to imitate a superior style, which, with their pecuniary ability, could only be counterfeited. There is no fondness of distinction more absurd than that kind of vanity which prompts one that he may surpass his neighbour's silver to gild his own brass; and it is a serious offence against good taste to cause a house or a garden to appear what it is not, or to deck it with ornaments which, in the minds of the cultivated and intelligent, are associated with very different objects. It is equally unwise to commence a system of operations, with a house and grounds, built and laid out in a superior style of decoration, that can be maintained only at a continual expense plainly beyond the ability of the owner.

With regard to the style which one should adopt in laying out his garden or his pleasure-grounds, which must necessarily be artificial in their character, and contracted in their dimensions, we think it only of secondary importance. In these cases it is well for every man to indulge his own peculiarities of taste; and we should as soon think of dictating to a lady the greater importance of a certain style of figures compared with another, for her carpet or house-paper—whether they should be regular or irregular, or, in the language of gardening, "arabesque," "gardenesque," or "picturesque"—as to dictate to the owner whether the style of his garden and inclosures should be regular or irregular, with walks angular or serpentine, straight or zigzag. We consider these things mere matters of fancy, not of taste.

NEW ROSES AND ROSE INFORMATION.*

Celine Forestier has her first bud in bloom. It is first-class, and like to last in bloom, but totally different in foliage from Triomphe de Rennes. Habit very fine. Claudia Augustin is a neat, tight, pale primrose, of good shape, formed in the centre like Ophirie, and would suit an orchard-house trellis. Eugene Appert is out a second time, and is the richest of the crimsons, thick in petal, and holds colour well. Anna Alexieff is a large and fine rose-coloured rose, of good shape, an abundant bloomer, and of the best habit. Stephanie Beauharnais is not like Ravel, but is a flattish, tight,

* This article is written as a postscript to that on page 299, but arrived too late.

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well-shaped pink rose, with centre silvery petals. It is neat, elegant, and novel. Armide is a nice, good habited, free blooming salmon pink, and worthy of a place in the rosery. Mademoiselle Aristide, a pale yellow, is pretty, but probably it will not be big enough for exhibition. It is a very strong grower. The French deem it to be the same as Madame Schutz. Beaute de Royghem is a very neat, good habited, free blooming, medium-sized rose. Its colour is pale pink, striated with carmine. I am "well up" in yellow roses to-day. Solfaterre, whose first bloom was 1570 buds (175 clusters were taken to Dorchester the 4th of June, and 50 clusters to Salisbury the 28th of June), is now in beautiful second bloom. Two trees of Triomphe de Rennes, and two of Gloire de Dijon, are also in abundant and most lovely bloom.

These three, and Celine Forestier, are the yellow roses that I will undertake to recommend, because they are good; and if they will do well here, they cannot fail elsewhere. However well yellow roses may do in the open garden, they will do far better if you give them a hot wall, half-inch bones, and a bed good enough for a vine. Triomphe de Rennes and Celine Forestier are, I think, for substance of petal and long endurance, the most signal of any yellow roses. Louise de Autriche gave me one very beautiful rose, but did not generally open well. I have had one very large and splendid bloom of Madame Vigneron, but I must see more of these before I undertake to recommend them.

With regard to white roses, Madame Zoretman is by far the best, and of first quality in petal; and Devoniensis is the most first-rate for petal and general beauty of the tinted whites. Blanchfleur is the most circular, and highly beautiful. The first two wear well for a long time. Princesse Clementine is the best pure white.

W. F. Radclyffe.

Rushton Rectory, Sept. 15.

HINTS ON THE CULTIVATION OF FRUIT-TREES, ETC., WITH SELECT LISTS.

As promised last month, I will now give a select list of a few good and useful fruits, flowers, and vegetables, with some hints on their cultivation. I will just premise that the fruits I recommend are such as are adapted to small fruit-gardens, as dwarf bushes and pyramids, or for orchard-house culture. The former I have grown most successfully for some years in shallow, sandy soil, where larger trees never have done well. This has been done by simply planting not too deep, leaving a small hollow a foot round each tree, an inch or two deep, mulching round each tree in the autumn with half-rotten dung, shaking away with a fork

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any litter which may remain in spring, lightly forking in the remainder, and stirring over the whole surface about the middle of February, and the second year after planting inserting a spade about nine inches or a foot from the stem of each tree, and running it under the tree to cut off any roots which may have entered the subsoil, and treading down the soil firmly again; this operation to be repeated every or every other year, according to the luxuriance of each tree. By adopting this method, apples and pears will bear abundantly, of the size of small gooseberry bushes, providing the right sorts are planted. Cherries and plums will not bear this rough root-pruning, but if too luxuriant, should be carefully taken up every two or three years, the roots pruned, especially the downward growing ones, with a sharp knife, taking care not to tear the roots.

I will give no directions for pinching and pruning, as these are to be found in the last edition of Rivers's "Orchard-house and Miniature Fruit-garden." The summer pinching of the shoots is most beneficial to all small fruit-trees, and should be attended to two or three times during the summer.

The sorts of fruit-trees I would recommend are—

Apples.—Hawthornden, new ditto, Red Margaret, Keswick, Kerry Pippin, Sam Young, Cox's Pomona, Nonpareil, Hughes's Golden Pippin, Ribstone Pippin, Alfreston, Quarenden.

Pears.—Doyune d'Eté, Colmar d'Eté, Beurre d'Amanlis, Louisa Bonny, of Jersey, Bonny d'Ezée, Beurre Superfin, Compte de Lancy, Bezy d'Espern, Adèle St. Denis, Beurre Deil, Josephine d'Malines, Compte de Flandres.

Plums.—Orleans, Jefferson, Early Favourite, Early Prolific, Victoria, Angelina Burdett, Reine Claude Violet.

Cherries.—May Duke, Royal Duke, Belle d'Orleans, Bigarreau, Elton.

FRUIT-TREES FOR ORCHARD-HOUSE CULTURE.

Pears.—Louisa Bonny, of Jersey, Doyune d'Eté, Beurre d'Amanlis, Bergamotte d'Espern, Colmar d'Eté, Josephine d'Malines.

Plums.—Greengage, Jefferson, Early Prolific, Early Favourite, Angelina Burdett, Reine Claude Violet.

Peaches.—Acton Scott, Early York, Sulhampstead, Noblesse, Royal George, Bellegrade, Mignonne Grosse.

Nectarines.—Elrage, Murray, Pitmaston Orange, Violette Hative, Balgowan, Duc de Telliers.

Apricots.—Blenheim, Moor Park, Gros Pêche, Breda.

Figs.—Brown Turkey, Early Violet.

Grapes.—Early Malengre, Purple Fontainbleau, Esperone, anche, Black Hamburgh, Trentham Black.

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In flowers for winter decoration of the greenhouse are—Tropæolum Brilliant; tree carnations and picotees; double tulips, three to six in a pot, the best of which are—Turnsol, Rex rubrorum, La Candeur, Gloriololis, Wellington, Conqueror, and Yellow Rose. *Verbenas*—Miss Trotter, fine scarlet; Elizabeth, pretty striped; Lady Cotton Sheppard, light scarlet, white eye; Calceolaria Aurea floribunda is a most free bloomer, of fine yellow colour, the best of all the shrubby ones for pots or bedding.

In vegetables, the very best and hardiest pea is Sangster's No. 1; the best early cabbage, Barnes's dwarf; the best two lettuces to stand the winter, brown and green cabbage, and brown Bath Cos; this latter may be sown now in corner of orchard-house, for early spring use, and this is also an excellent place to sow a few radishes, mustard and cress, parsley, etc., for the same purpose.

As I fear my article is already too long, I will next month give some hints on the cultivation of the grape-vine, with a select list of sorts for the rafters of a greenhouse or vinery. By the by, I forgot to say I have fruited the new American blackberry this summer. The fruit is twice the size of the common sort; all the berries are perfect; it ripens earlier, and is altogether a good thing, and no *sell*, as I once feared. B.

MAKING A PIT FOR TENDER BULBS.

It is well known that the belladonna lily, ixias, irids of the tenderest kinds, alstræmerias, many of the hardier amaryllids, Japan lilies, agapanthus, etc., bloom well for years when planted at the foot of a fruit-wall of a hothouse, or even greenhouse. They would do almost equally well at the foot of any other wall where they could be treated with plenty of moisture and sun when growing, and comparative dryness and protection when at rest. The whole of these would do equally well in a small pit, say five feet wide; the bottom thoroughly drained, an open stratum of rubble above that, of nine or twelve inches, and a staple of sweet, sandy loam, of eighteen inches, over all. This would enable all the bulbs to be planted deep enough, and, provided that the bottom was solid below the rubble, there would not, in the case of the larger bulbs, be much chance of their roots getting too deep: with such a convenience, the staple soil could be regulated with peat or rotten leaf-mould, according to the requirements of each kind; and, once established, the bulbs would bloom with a vigour that could rarely be met with under mere pot culture. As such a pit would need protecting only in the winter and spring months, the height of its walls need not be more than two feet above the

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soil inside at back, and one foot in front, making four feet as back altogether, and three in front; the half, if deemed advisable, being below the surrounding level, so that all may be easily seen and examined, provided that drainage can be easily accomplished. If there be any difficulty in this drainage, we would scarcely sink the bottom of the pit below the surrounding level. The walls will be neatest if of brick, and, but for the expense, we would make them of fourteen inches and hollow: if the wall were only nine inches, that we would prefer being hollow: the wall-plate all round would keep all firm and secure, and though it would be best to have rafters from back to front in the usual way, they would not be essential. For covering such a pit we would use chiefly wooden shutters, as the cheapest in the end, though covers made of Asphalte felt would do very well. A few glass sashes would be necessary (say for a third of the length of the pit), in order to give light to those kinds that grow in winter and very early in spring: the wooden covers would keep all those safe that rested in winter or did not appear above ground until the spring. Were it not for the expense of the thing, we would have no objection to have glass all the way, and wooden shutters to be used only in extreme weather. Keeping economy in view, much may be done with wooden shutters almost alone. Of course, in planting, the period of growth should be considered, so that the winter growing and summer growing should be kept distinct. The interest arising even from the care required to manage such a pit would be very great; and the pleasure would be increased by having something fresh to look at for the greater part of the year, from a few hyacinths early in spring to gladioli and belladonnas late in the autumn. Though we have spoken of a brick pit, for neatness, that is not at all necessary; a double wall of stout boards, with four inches between them, stuffed with sawdust, would be equally suitable. In fact, a wall or paling of slates, backed with grass turf, as a turf-pit, would be as good as anything, so far as protection went; but the great drawback to all such contrivances for this purpose is, that they would be apt to harbour mice and other vermin, which might soon destroy the finest bulbs. On this account alone we prefer brick, as affording no nestling-place. A narrow pit of this kind, some twenty, sixty, or more feet in length, according to taste and convenience, would, except in the few dark months in the year, yield a pleasure second to none that a garden could afford; and that pleasure will be enhanced in proportion to the skill, attention, and labour bestowed. The short cultural notes in the body of the catalogue will help the uninitiated in the right management; and such a pit, and such a mode of using it, we heartily commend to all our

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correspondents, and especially to those having suburban residences, with little ground to spare for floral display.—CARTER'S *Vade Mecum*.

REVIEW OF THE AURICULA BLOOM.

DEAR SIR,—Agreeable to promise I beg to forward my notes on a few blooms of auriculas taken last spring. Owing to the severity of the winter, and their being much neglected by my long-continued illness, many of the best varieties failed blooming; yet there were some, perhaps, both in size and quality, the finest I ever produced. In green-edged varieties, Littons' Imperator, one truss with eleven, one with nine, and two with seven pips each, were remarkably fine, as it always has been with me, whenever the plant is in anything like condition. Taking its robust habit, constancy, perfection of pip, and formation of truss, mounted upon an unusual lofty stem, I consider it one of the best we have. Fletcher's Ne plus ultra, not commonly seen a green-edged variety, though it has occurred several times, generally upon maiden plants, in which state it is much more refined than when stronger, as it then often inclines to coarseness, with large tube, very irregular truss, often one pip twice as long as any of the rest. This I have found in a great measure arises from being grown too strong. When rightly managed it is first-rate. Queen Charlotte, *alias* Princess Charlotte, raiser unknown to me, generally green edge, though occasionally gray; in either state a real gem. I think it the best flower we have in cultivation; at least it is the best I have seen. A more perfect specimen could not be drawn by an artist, so beautifully circular and flat the eye, as though moulded from the finest wrought china; such exact proportion in ground and edge altogether forming a complete set of circles. It is somewhat surprising I have never met with this variety either in a collection or described in a catalogue, nor can I find any one that knows anything of it. Though healthy, it is remarkably shy of increase, having grown it above twelve years for four plants, one of which died.

Oliver's Lovely Ann, which I had, green-edged, gray-edged, and intermediate in the same season. My description and opinion of this flower differs from others materially; it is beautiful with me, and often as perfect a green-edge as could be desired—a quality many are not willing to grant. I once showed Colonel Taylor, Booth's Freedom, and several other good flowers against it, when it took the premier prize, and justly so. This last season one with nine pips, and two with seven, were all fit for any exhibition.

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It is rather faint in colour of tube, and a trifle too pointed in petal. In describing my own seedlings, which would have been much more acceptable reported from an exhibition, not having this opportunity I hope will be sufficient apology for describing them upon my own responsibility, feeling the fullest confidence, if ever such chance occurs, they will fully sustain the character herein given.

Splendour, a seedling of my own, raised in 1855, from Ashton's Commodore Napier, and first bloomed in 1856. This flower, like many other good varieties, is extremely shy of increase, yet in fine health, and has bloomed this season equal, if not superior, to the three foregoing seasons, and with the same number of pips each time, viz., five. It has only within a few weeks, for the first time, shown one small offset; the tube a rich yellow, circular, and medium size; eye dense white, grained black, very regular, but scarcely broad enough for the size of the pip, consequently the margin, an extremely rich light green, is rather beyond proportion—the only fault I find in this charming variety; the outline well filled up and as circular as can be, each pip larger than a two-shilling piece, and truss of excellent form. In gray edges we will begin with Cheetham's Lancashire Hero, a splendid variety; when well grown, one bloomed a green edge with seven pips, decidedly the best I have had since I grew it, and in my opinion far better in green than gray. Whatever it may be in other hands, with me, it is always deficient of pounce upon the margin to constitute a first-rate gray edge; in all other respects, it is the A 1 of its class; rather a shy grower. Sykes's Complete, truly round, produced fourteen pips on one plant, and being thinned out to nine, was a most beautiful truss, and decidedly a beat upon the crack Hero, owing to the margin being so dense and evenly laid on; it is remarkable in producing many pips even on a very small plant; rather a shy grower. Fletcher's Ne plus ultra was remarkably fine, with seven pips, dense margin, and splendid truss. I took this flower to our Horticultural Library, where it was said to be decidedly the best flower ever seen in that room. Fletcher's Mary Ann, of late years, has been sickly; when in health a useful flower for exhibition, being a dense gray, though not first-rate in shape nor tube; seldom produces more than five or six pips. Staton's Ruddington Hero, so promising the first year it bloomed as to induce me to be a purchaser of the plant for 15*s*., but I have never had it so good since, the ground being apt to break through; corrected of this, it would be a good flower, being free and early in bloom, and lasting well; I believe raised from Privateer, which it much resembles. Star, a seedling of my own, raised from Oliver's Lovely Ann, first

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bloomed in 1857, with eleven pips; such a truss for form with this number I never before have seen; deep coloured small circular tube; eye and ground extra fine, and very exactly proportioned, and yet it does not suit me. I think I hear some one say, on reading this, What can the man want? I only want a good outline to make it one of the best flowers ever raised, but it is sadly pointed, which I fear will always be fatal as a show variety. May-day, a seedling raised from Taylor's Incomparable, first bloomed in 1857, with five pips on a very small plant, fine tube and eye, ground rich purple, rather broad but well defined, margin well pounced, pip circular and flat, truss well formed, stem rather short. The plant, the only one I have, is still small, though healthy. I have great hopes in this seedling if it can be urged into a strong plant; it was an error to suffer it to bloom out from so weak a plant at first. I only allowed one pip to bloom this season; when I pinched off the rest, this one was the best yet produced—hence my hopes. Eliza, a seedling from Booth's Freedom, very similar in colour save the edge, being an extremely dark gray, very circular and flat, and trusses well. Some think this the best of the lot, but, like its parent, of very sickly habit, and I much fear losing it altogether.

I think this includes all that were fine in the above classes. With your permission I will endeavour to give the notes on white edges and selfs in my next paper.

Dennan Street, Radford, Sept. 19. SAMUEL HAMMOND.

SCOTTISH PANSY SOCIETY.

AT the meeting of this Society, held on the 6th of July, the following prizes were awarded, and flowers exhibited:—

Nurserymen: 24 Dissimilar Blooms.—1. Messrs. Downie and Laird, Edinburgh, with Ladyburn Beauty (White and Sinclair), Royal Standard (Dickson and Co.), Duchess of Wellington (Downie and Laird), Rev. Joshua Dix (ditto), Lord Cardigan (ditto), Miss Talbot (Dickson and Co.), Countess of Rosslyn (ditto), Francis Low (Downie and Laird), Mary Lamb (Douglass), Perfection (White and Sinclair), Una, Miss Carnegie, General Young (Hooper), Mr. F. Graham (Douglass), Cream of the Valley (Hooper), Nepaulese Chief (Paton and Small), Venus (Hooper), C. W. R. Ramsay (Douglass), Alex. M'Nab (Downie and Laird), Captain Hall, Jessie (Hooper), Mrs. Laird (Downie and Laird), Mrs. F. White (ditto), Mrs. Downie (ditto). 2. Mr. G. White, Paisley. 3. Messrs. Robertson and Paul, Paisley. 4. Messrs. Dickson and Co., Edinburgh.

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Practical Gardeners and Amateurs: 18 Dissimilar Blooms.—1. Mr. Fraser, Belmont, with Earl of Derby (Black), Countess of Rosslyn (Dickson and Co.), William (Reid), Rev. Joshua Dix (Downie and Laird), Royal Standard (Dickson and Co.), Duchess of Wellington (Downie and Laird), Alice, Mr. F. Graham (Douglass), Mary Lamb (ditto), C. W. R. Ramsay (ditto), Titan, Captain Hall, Una, Sir J. Cathcart (Turner), Ladyburn Beauty (White and Sinclair), Cream of the Valley (Hooper), Lord John Russell (Turner), C. M'Intosh (Downie and Laird). 2. Mr. James Thompson, Silverknowe. 3. Mr. Arch. Dunlop, Ingles Green. 4. Mr. William Perrey, Broomfield, Davidson Mains. 12 Dissimilar Blooms.—1. Mr. Prentice, gardener, Burnbrae, Paisley, with Eugenie (Dickson and Co.), Emperor Napoleon (Hooper), Lizzie (White and Sinclair), Mrs. Dodwell (Holland), Countess of Rosslyn (Dickson and Co.), Perfection (White and Sinclair), Duke of Sutherland (Oswald), Jeannie (Downie and Laird), Mr. R. Masson (ditto), Duchess of Wellington (ditto), Optimum (Robertson and Paul), Ladyburn Beauty (White and Sinclair). 2. Mr. John Frazer, Belmont. 3. Mr. Wm. Perrey, Broomfield. 4. Mr. W. Wilson (amateur), Cathcart. Six Dissimilar Blooms.—1. Mr. Prentice, Burnbrae, with Duchess of Wellington (Downie and Laird), Col. Windham (Dickson and Co.), Captain B. Steuart (Douglass), Seedling, Jeannie (Downie and Laird), Countess of Rosslyn (Dickson and Co.). 2. Mr. C. Watson (amateur), Dunse.

Amateurs exclusively, who cultivate their own plants: Six Dissimilar Blooms.—1. Mr. Dobbie, Renfrew, with Sir Colin Campbell (Paton and Small), Captain B. Steuart (Douglass), Mary Lamb (ditto), Seedling, Col. Windham (Dickson and Co.), Gem (Syme). 2. Mr. W. Wilson. 3. Mr. C. Watson.

Open to all: 12 Dissimilar Blooms in Classes—four selfs, four light grounds, and four yellow grounds.—1. Messrs. Downie and Laird, with Jeannie (Downie and Laird), Rev. Joshua Dix (ditto), Ladyburn Beauty (White and Sinclair), Alex. M'Nab (Downie and Laird), Mrs. Downie (ditto), C. W. R. Ramsay (Douglass), Francis Low (Downie and Laird), Saturn, Col. Windham (Dickson and Co.), Mary Lamb (Douglass), Countess of Rosslyn (Dickson and Co.), Mrs. Laird (Downie and Laird). 2. Mr. James Thompson. 3. Mr. Perrey.

Single Blooms: Gardeners and Amateurs.—Self, Mr. James Thompson, with Alex. M'Nab (Downie and Laird); yellow ground, Messrs. Downie and Laird, with Perfection (White and Sinclair); light ground, Mr. George White, with Mary Lamb (Douglass). Best flower in the room, Mr. J. Thompson, with Alex. M'Nab (Downie and Laird).

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Amateurs exclusively.—Dark self, Mr. James Dobbie, with Gem (Syme); yellow self, Mr. William Wilson, with Yellow Model (Hooper); light ground, Mr. William Wilson, with Countess of Rosslyn (Dickson and Co.); yellow ground, Mr. C. Watson, with Mrs. Downie (Downie and Laird).

BULB CATALOGUES.

At this season we are always reminded, by the arrival of winter, to prepare for our gardens a succession of flowers, to enliven the dull, dark days. The arrival of two most excellent catalogues calls for some notice.

Carter's Vade Mecum, or Autumn Supplement, is a book full of valuable information. Every one knows Carter's catalogues, they have become universally familiar, and it is saying quite enough to satisfy all who have studied the spring portion, issued by the Messrs. James Carter and Co., of Holborn, that the present supplement is fully as worthy of perusal. The descriptions of the various bulbs, the cultural directions, and the sensible manner in which everything is *practically* laid down, are not the least recommendations. We can say no more, if we were to write a couple of pages, than advise every one to send for it. The two extracts in the present number are a fair specimen of the whole.

Butler and M'Culloch's Autumn Catalogue consists of fifty-six pages of closely-printed information, particularly useful at this season. The instructions for cultivating the Gladiolus tribes are admirable, and any one who cultivates this tribe of plants should at once read its pages. Cape Bulbs also receive great attention, and some remarkably good hints on their culture, which we should this month have quoted, but are short of space. Address and further particulars will be found in the advertising pages.

We cannot too strongly recommend both these catalogues.

Dobson and Son's Catalogue of Pelargoniums is also come to hand, and contains several important novelties, among which, Distinction, Fairy, General Garibaldi, and Ruby, form very attractive varieties, being new and quite distinct from anything out, and very useful to exhibitors. The following is a list of new Cinerarias:—Amy, Beauty, Hyperion, Mr. Marnock, Master F. Watson, Masterpiece, Rifleman, and Rough Diamond.

We have also the Bulb Catalogue of the same establishment.

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THE VEGETABLE GARDEN.—OCTOBER.

Spring Cabbages.—About the middle or latter end of the month the plants will be sufficiently large to set out. The land should be carefully and deeply dug, and well manured with half-decayed stable manure. If the land is at all stiff, the planting should proceed with the digging, to avoid heating the soil. A dry day should be selected for the work. At this season of the year the rows for the larger sorts may be two feet wide, and twenty inches from plant to plant. Two or three pounds each of guano and salt should be applied in moist weather in February or March; it will facilitate the growth and make them exceedingly tender.

Coleworts.—Colewort planting, for spring use, should be finished without delay.

Lettuces.—Transplant these earliest opportunity. Select a warm spot; set them out ten inches each way; take them carefully up with a small fork or trowel, to preserve as many roots as possible. They will not grow well if this is not attended to. The ground should be well manured, and neatly raked before setting out. A single row at the foot of a south wall is an excellent place for early lettuce. Keep a reserve of plants to make up deficiencies hereafter, as the snails and slugs will be sure to attack them.

Rhubarb.—This is the season for making plantations. The ground must be trenched deep, and heavily manured. The plants do better if set out in a single row, allowing either three or four feet from plant to plant, according to the depth and nature of the soil; but if grown for exhibition, five feet from plant to plant will not be too much for a permanent plantation—that is, to last for ten or twelve years. Plants should be procured of two years' growth from seed, which is far preferable to parting old roots. Seedling plants, of almost any variety, can be obtained at from 6*s.* to 12*s.* per dozen roots. The sorts to be recommended are Myatt's Linnæus for early, and Myatt's Victoria for late use. They are fully equal in flavour and produce to the newer and more expensive kinds. In taking up the plants, be careful not to injure the roots, as bruises are apt to induce decay. In setting out, place the crown of the plant about two inches below the surface of the soil; this will be a sufficient protection in winter time. The first year after planting no stalks should be pulled, or the produce in succeeding years will be small and almost worthless. The first year's growth should be left to ripen and decay, and then carefully forked in about the roots as a manure. Soot is a manure highly congenial to rhubarb, and

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will cause it produce large stalks and rapid growth. The roots should never be stripped of leaves; a good number should be always left to draw the sap up; and when fine stalks are required, none should be pulled after the middle of June. This will give time for the buds to grow for the succeeding year's produce. In cultivating the soil about the plants, no other tools should be used than the fork; a spade would prove very destructive to the roots. Liquid manure will prove serviceable, if applied in the spring months. For forcing rhubarb full instructions will be given next month. JAMES LEVESQUE.

Market Gardens, St. Lawrence, Jersey.

OPINIONS OF FLOWERS, ETC.

C. S., Berwickshire.—The geraniums were much withered when we received them; we could see nothing new or striking in either variety; probably there may be if we could see the plants growing; a single leaf and single flower are not fair tests of even average merit.—JOHN DOBSON.

A FREAK OF NATURE.—We have before us a very singular monster of a carnation raised by Mr. William Clark, in which the place of the ovary is occupied by a second flower, complete. As the sender says, there is a pod within a pod. In this instance, the accessory flower is no lateral or axillary production, but a direct termination of the axis. The stamens are much increased in number, and are all in the form of deformed and distorted petals, bearing pollen cells on their margin; and, strange to say, one of the lobes of the calyx of the inner flower bears a long filament below its point *on the outside!* We remember no similar case. There was, however, no change in the pistil, all the parts of which were normal.—*Chronicle.*

COLD IN THE DOG-DAYS.—On the night of Wednesday, July 25th, or more probably early in the morning of Thursday, the thermometer in the garden of the Horticultural Society at Chiswick sank to 34° Fahr. In the same place, a radiating thermometer marked 30°! Have we any authenticated parallel to this in the dog-days?

INTERNATIONAL EXHIBITION OF 1862.—It is fully determined to hold an Exhibition of All Nations, to be held on the site granted by the Commissioners for the Exhibition of 1851, at South Kensington. A guarantee list, amounting to upwards of £349,000, has been published.

WORK TO BE DONE—OCTOBER.

Carnations and Picotees should be finished off repotting; the stock generally must have plenty of air. Green-fly and all dirt must be avoided.

Cinerarias.—Continue to encourage them to make a strong growth, and stop them as before recommended. Although these plants delight in moisture, yet it must be administered with caution, as the leaves soon fag off, and the beauty of the plant is soon spoilt. Repot any plants that may have filled their pots

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with roots, and on no account allow them to get pot-bound. Keep a careful watch for the green-fly, and fumigate as soon as observed; choose a damp, still night for it. Side-shoots will strike freely if placed in a warm house.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Fuchsias.—Little requires to be done this month; plants as they go out of flower may be gradually dried off and stowed away. Young plants may be kept gradually moving; cuttings, if they can be obtained, will strike freely, and make some strong early stuff.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Pansies.—Such as are intended to be wintered in pots must be potted up without delay; young cuttings will do well in thumbs or sixty-pots. Plants for growing for specimens in pots should be put into forty-eights; after potting them, allow them to remain for a day or two without any water; a little air may also be given them. See before putting them into a frame that slugs and snails are destroyed; if any are to be found towards the middle and latter end of the month, give the plants all the air it is possible to give them. Keep the foliage dry; beds may be made for standing the winter; on a south or west border will suit them best, and will produce some fine early blooms.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Roses.—All orders should be given at once when it is intended to plant; early orders are always sure to secure good plants. Compost may be prepared. Those in pots may be partly taken into the greenhouse.

Pelargoniums.—Repot all the specimen bottoms which have been disrooted, and have by this time got well established, putting them into the pots they are required to bloom in. Use a tolerably rich holding soil, and a fair supply of broken pots for drainage; water the plants with a sparing hand, and if the weather is damp and cold, occasionally light a fire in order to dry up the damp, and to get the heating apparatus in order, as a saving of time, and in some cases expense, may be prevented by following this plan, especially if it should be required in a hurry. Clean the plants occasionally of yellow and dead leaves, weeds, and green-fly.—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Greenhouse.—If necessary, paint, and at all events wash stages, shelves, floors, and every other part. After this, you must bring in from out of doors the plants; they should be carefully gone over, tied when necessary, and the pot well cleaned; they must then be placed on the stages, etc., giving each sufficient light, air, and room. A few hyacinths, narcissus, tulips, and other bulbs, may advantageously be planted in pots towards the end of the month, and will be in bloom when flowers are scarce. Give air freely, and yet be careful of cold, cutting winds.

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HERBACEOUS AND SUB-SHRUBBY CALCEOLARIAS.

It is more than probable that among the readers of the "Midland Florist" there are many growers of the calceolaria; many others would be did they not experience a difficulty in managing them, and which is only imaginary. Growers of seedlings experience a difficulty in getting the seed to germinate, and why is this? Because, if traced, it will be found that the seed is buried too deep. When it must readily be admitted that the seed, being so minute, perhaps the smallest seed there is, cannot possibly raise up or strike through a quarter of an inch of mould. It therefore becomes necessary to sow the seed on the surface of a little silver-sand, and place a piece of glass on the top of the pot, after watering it, and on the glass put some moss. The seed, if good, must germinate. The plants once up, a little care is necessary, such as putting them in a place where the sun does not directly strike on them; otherwise, if a little wet gets in among them, they will most likely fog off, spreading until the whole of them are destroyed. This we have had to contend with, but taking the precaution before mentioned, we never have a failure. The thrip is a great enemy to the plants while very small; should they be observed, the best way to get rid of them is to blow them off as well as you can with the breath. Partly fill a large pan with water, in this put a pot bottom upwards, and on this put the pot of seed, this will prevent slugs getting at them as well as the thrip. As soon as the plants are getting their second or rough leaf, they may be pricked out in the pans, being careful that they are not bruised. They like a light soil, the top to be sifted small, as the roots are so fine. A warm house, say 50° or 60°, suits them well for a time, and they should be sprinkled occasionally, at no time allowing the mould to get dry. As soon as large enough—say when they have five or six leaves, a good size—repot them into small pots, and repot them again as soon as the pots are full of roots, not pot-bound. If grown merely for home decoration, a thirty-two sized pot is large enough, into which they should be put about the end of February. This is all that is required in growing the calceolaria from seed, except that, after the plants have received a start, after potting, they should be kept at a moderate temperature, never more than 45°, and on dry days, towards the spring, having the foliage damped over occasionally. Plants for specimens require a treatment which is very simple. We will commence with the seedling plants in bloom. Such as are really worth growing again may be marked, and after

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flowering may be cut down and put into a moist shady frame where the sun does not get at them, say a north aspect. When they appear to be making a little growth, rub them down; that is, reduce the ball of earth and pot them back into the same size pots (clean ones); place them in the frame again, and keep close for a few days. Do not encourage them to make too much growth; but when they seem to be getting hold of the stuff, give them plenty of air. About this time (the middle of October) they may be removed to the greenhouse, and kept fumigated once a fortnight; for if the green-fly once gets curled up in the leaves, it is some trouble to get rid of them. Therefore keep them away, if possible, as they are the greatest enemy to this class of plants; and all the skill in the world will not allow you to make a specimen if they are once allowed to get ahead. Occasionally repotting them, until they have been put in the restricted size pot, is all that is necessary, with a cool temperature, as recommended for seedlings. One stopping will be enough, say the middle of February; and if properly managed, a specimen, three feet over, will not be difficult to get. It is impossible at present to show them without an almost unlimited number of sticks. Light sticks, painted green, should be used, the plant not wet at the time they are tied, beginning at the front of the plant and working to the back. This should be done a few days before the show, as any shoots which may have been pulled about will have time to get into shape, and make every flower tell. Towards this should be for the last tie; they should, however, be partially gone over a few weeks before the time they are wanted, and with a few sticks train the shoots out to the required form and size, and this will prevent the flower-stems growing one among the other, and thereby lessen the trouble at a future time.

Woodlands Nursery, Isleworth. JOHN DOBSON.

ESSAY ON THE CHRYSANTHEMUM.

THE following essay, read at the Meeting of the South Metropolitan Chrysanthemum Society, will be read with very great interest. Mr. Oubridge, the writer, is the gardener to J. Foster, Esq., Stamford Hill, and his extraordinary fine plants, exhibited for some time past, will be sufficient warrant of his abilities and success. Mr. Oubridge contributed some excellent calendarial directions to our pages last year, and many of our readers, by their letters, have testified to their usefulness and practicability:—

In the cultivation and propagation of large-flowered varieties,

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as specimen plants on single stems in eleven-inch pots for exhibition, my practice is as follows:—

As soon in November as suckers are sufficiently strong, I select the one which is most vigorous, from a healthy plant, and remove all eyes with a sharp knife, so as to prevent the plants from producing suckers till they have completed their flowering season. I then insert in a three-inch pot each sucker singly, using the following compost:—A little rotten dung and some nice mellow loam, with a good sprinkling of sharp silver-sand, draining the pots with small clean crocks. They are then placed in a cold frame or on the shelf of a greenhouse, where no cold draughts can affect them while rooting.

If in the latter part of December you find that they are becoming established, admit plenty of air when the weather is mild, in order to prevent weakly growth, and thus cause the plants to be short-jointed. In January choose the strongest of those plants that are well rooted, and pot them into large-sized or five-inch pots in the compost just mentioned, and encourage growth as much as the season will permit, but take care that the vigour and sturdiness of the plant are in proportion to its growth. One point in growing plants for exhibition I would impress upon beginners, and that is, do not subject them to bottom or top-heat with the view of pushing on their growth; if frost is just excluded that is enough. By the middle of February, if all has gone on well, the plants will be sufficiently strong to be stopped; the number of breaks or shoots you desire to insure must depend on the vigour of your plants (and here the operator must use his own judgment), but I would advise from six to seven eyes to be left; should more be allowed to remain the chances are that the lower eyes will not emit shoots, or if they do they will break weakly. Remember that in proportion to the attention bestowed on training in the earlier stages of growth, so will be the result as regards future growth and perfection of flowers. Some varieties of chrysanthemum differ from others in constitution, a knowledge of which can only be acquired by close observation; some, for instance, will bear several degrees of frost with impunity, while others will not stand frost at all. The wisest plan is, however, not to subject them to it. When giving air, observe the quarter from which the wind blows, as an easterly or north-easterly wind, if allowed to have free access to the plants, will prove injurious.

If in March you find that the plants have emitted shoots freely from all the eyes you left at the period of stopping, you may at once repot them into thirty-two-sized pots, but do not do so unless they have pushed shoots regularly from every eye; some-

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times the lower eyes will not break so early as the upper ones, therefore, in order to induce a uniform emission of shoots, have recourse to the simple plan of gently bending the heads of the stem downwards, fixing it in that position by means of a peg, returning it to its original position as soon as your object is attained. The plants will require the protection of glass till the middle of May, but remove the lights on all favourable occasions previous to that time, or you will not insure robust growth, and no after-treatment will make up for this neglect. In potting at this season use a small quantity of mellow cow-dung, but as worms generate abundantly in this manure they should be carefully picked out before incorporating it with the rest of the compost. Should mildew make its appearance slightly dust with powdered sulphur. Green-fly should also be watched for; it feeds greedily on the new or sappy portion of the wood, and sadly cripples the progress of the plants if not speedily destroyed by fumigating with tobacco.

In April, if previous directions have been attended to, the plants will be assuming a bushy habit and daily exciting interest. The way in which they are to be trained must therefore now engage attention; for on this no mean portion of the beauty of a specimen depends, and in order that you may the better preserve your plants in good condition. As regards foliage do not let them suffer from drought, but on the other hand do not water too copiously; both extremes soon change the colour of the foliage from green to yellow, and decayed leaves are the result. In training for the first time fix a stick to the main stem; to this loop your side shoots, and then proceed to bend some of them down to the edge of the pot; this had better be done gradually at two or three different times, as they require to be tenderly handled, the young wood at this stage being brittle and apt to snap. When you have completed this operation, and your plants are thoroughly rooted in the pots they now occupy, you may stop all or such shoots as you may consider to require it; the length at which they are to be left must be in proportion to their strength. Do not let the plants be cramped for want of top room, or they will become spindling and long-jointed. On fine mornings they may now be syringed with clean water, this will free the foliage from any dirt that may have settled on; but take care that your plants are perfectly dry before you shut them up for the night, for fear frost should find its way to them.

As soon in May as you discover the break caused by the last stopping, shift into eight-inch pots, selecting for the purpose the healthiest and strongest of your plants. For this potting let your soil consist of as much turfy loam as possible; mix it with

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the formerly mentioned ingredients, also pound a quantity of oyster-shells and mix them with the soil; they will assist in keeping it porous and supply food to the plants, as they contain a good deal of the superphosphate of lime; likewise use a little charcoal in your drainage—it helps to preserve the foliage in a healthy green state. After potting, if the weather will permit, you may move the plants from under glass to a sheltered spot in the garden. Towards the latter end of the month shift them to a more exposed situation; but in doing this be sure you place a slate or something of the kind under the pots to prevent worms from entering it, for should they gain admission they would destroy the activity of the soil by clogging up the drainage.

In June the plants, if properly treated, will be growing fast; stop them again if their strength will allow of it; place them at such a distance apart as will admit a free circulation of air all round them. Keep them constantly turned so as to prevent one-sidedness of growth: I aim at training the plants in the form of a pyramid. As June is generally a very hot month, drop the pots in which the plants are growing into one a size larger; that will check the rapid evaporation which otherwise would take place from the soil. The chrysanthemum being a gross feeder and fond of plenty of moisture, on no account let it suffer for want of it, or else you will mar the beauty of your plants. In very hot weather let the ground round them be watered with a fine rose, by which means a genial moisture will ascend and refresh the plants. You may also syringe them night and morning, which will prevent the attack of thrip. Attend as hitherto to training in order to prevent the shoots from becoming overcrowded.

The month of July having arrived, finally shift into eleven-inch pots; use a small quantity of sharp sandy grit with the soil this time, and add also strong rich manure with other stimulants that may afford a vigorous growth. When the plants have been some time inured to their final shift, and the roots begun to expose themselves on the surface of the pots, supply manure-water. During the hot season I use cow-manure for mixing with the water on account of its cooling and nourishing properties; and in autumn sheep's-dung and soot, which possess very stimulating powers, producing, when used judiciously, healthy and beautifully robust growth.

August.—This is generally a very hot month. Take care the plants do not flag for want of water, examine them twice a-day at least; also attend to the training of the shoots to prevent crowding.

September.—This month is more favourable to the generation of sap than any month of the year, on account of the warm

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humid atmosphere which prevails; and that growth made at this time may be encouraged. Supply the plants liberally with manure-water as previously recommended.

It will now be time to select the late-flowering varieties and place them under a south wall, as that will forward their flowering. But look sharply after earwigs, which now make their appearance and commence the work of destruction among the points of the shoots. Use every means in your power for their extirpation. You will best discover them after dark by searching for them with a lighted candle or bull's-eye lantern. When the flower-buds appear, only let each lateral shoot mature a well-formed bud—remove the remainder. If the early-flowering sorts are likely to be too forward, do not place them under glass till the weather compels you, but form a temporary shelter for them from slight frost and rain. It should not be a south aspect.

The following twelve varieties I have found to be in every way best suited for pot culture, as they all possess an excellent habit and maintain their foliage:—Annie Salter, Arigene, Alboni, Chevalier Dumage, Christine, Defiance, Prince Albert, Golden Christine, Progne, Pilot, Vesta, Phidias.

THE VERBENA.

THE two most useful plants for villa garden decoration are undoubtedly the verbena and the scarlet pelargonium; and so long as our present style of gardening exists, so long will the verbena be cultivated. The old English style of garden was composed of borders in which were planted herbaceous plants, evergreens, and the like; the only additions were the annuals, and these sown, the bed simply required being raked over, and so was completed, the only care being to keep perfectly free from weeds, and also the plants properly tied up. Our new system of gardening (although it can hardly be now termed new) demands quite a different class of occupants. Nowhere, however, do we find our requirements more fully met, than in those tribes of exotics which flourish so well in our climate during the summer months. What is there that can be compared with a well selected and arranged collection of verbenas, pelargoniums, petunias, ageratums, lobelias, calceolarias, and fuchsias, for gorgeous display, for neatness of appearance, and for general effect? I know of no plants so suitable, and there are none among these which possess such variety of colour, and which, for usefulness to the villa gardener, can be compared to the verbena.

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As a florists' flower, too, the verbena has great claim; and a really well-grown pan of twenty-four blooms—although I am sorry to say such are few and far between—is a source of much admiration.

Soil.—The soil most suitable for the verbena, and, indeed for bedding out plants in general, is not over-rich. I would advise that instead of rotten manure, rotten leaves or other thoroughly decayed matter be used. Good drainage, however, is highly essential, and I would not advise too strong a compost. For pot culture, a mixture of good turfy mould, decayed leaves, peat, and sand, are best; of course the proportion of the first two being greater than the latter.

Propagation.—The propagation is twofold, by cuttings and seed.

Cuttings.—The general system to obtain a sufficient stock of verbenas for bedding out purposes is to keep through the winter a few plants of each variety. These are readily procured by taking up in September shoots which have been pegged down, and which will at that time have a considerable quantity of root. Pot these off carefully, giving an abundance of drainage, and remove to a cold pit or frame. Here they may be safely wintered; and if you are fortunate to save four or five plants of your favourite varieties, almost any amount of cuttings may, with a little tact, be secured. Spring-struck cuttings are universally acknowledged to be superior to those struck in the autumn and kept through the winter; and I have myself proved by repeated trials that the plants are more healthy, less liable to green-fly, and bloom more freely. I will suppose that February has arrived. Repot your plants, using good compost and abundance of drainage, and place them in a moist, warm, growing atmosphere, ranging about 60°. Here they will soon show signs of life, and a first crop of cuttings will speedily be formed. These may be removed, and, being planted in boxes filled with a good rich compost to the depth of four or five inches, and placed in a hot-bed, will form roots in a few days. In, say, a fortnight, remove your boxes to a rather cooler atmosphere; by this time a second crop of cuttings may be taken off the old plants, and also the centre of all the first crop of cuttings may be taken out, about two inches in length, and will strike readily. I would not advise potting them off, but leave them in the boxes until planting out season arrives, taking care in the meantime not to use too much heat, but to keep them perfectly hardy. A very good method, and one by which the plants will strike more readily, is to place over your compost a quarter of an inch of fine silver-sand. Through this insert your cutting, so that it will touch, without entering, the soil beneath. Several varieties, very shy breeders, are easily propagated in this manner.

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Seed.—Seed may be sown in heat in February, using pans, and a mixture of leaf-mould, peat, and silver-sand. The seed soon vegetates; and when your plants are large enough, place round the sides of pots or in boxes, where they may remain and receive similar treatment to that prescribed for those raised from cuttings.

Young plants require much attention. If frosty, protection must be given; and if open, air must freely be admitted; while if sunny the frames must be shaded. Water judiciously. At night cover up your frame, and should wet weather prevail, give all the air possible to keep off mildew; at the same time this treatment will check green-fly. If this make its appearance, at once fumigate, and also, should the plants show any signs of mould or mildew, sprinkle plentifully with sulphur. Remove decayed leaves as they appear, and watch for slugs.

PLANTING OUT.—Although there are advantages to be derived from seizing an early opportunity for planting out, still the numerous failures and disappointments arising out of the sudden return of severe weather teaches us that it is unsafe to commit our bedding plants to their summer quarters until the last frosty night is really past. I think, in the south, this period may be fixed at the end of the first week in May; in the midland counties a week or ten days later, and so in proportion. Frequently during April the weather is mild, the plants are getting crowded, we get impatient, and then are rash enough to turn out. The result is, some morning we get up, pay a visit to our beds, regret the sorry appearance, the blackened shoots, but resolve that for the future we will never be again tempted to so foolish a proceeding. Alas! alas, human frailty! the next season frequently finds us making the same mistake, and of course again repenting and resolving.

I presume that your plants are healthy and bushy, and also that they have, by being pretty freely exposed to the air, attained a certain amount of hardiness. The middle of May having arrived, planting may be commenced; but prior to this, a consideration of how the various colours will blend, harmonize, and contrast, is requisite. It is an excellent method to take a sheet of paper, on which draw the form and relative sizes of the beds. Of some varieties you will have a larger stock, and these must be so arranged as not to destroy the effect of those of which you have only a smaller number. Having formed your plan, take your plants out to the quarters assigned. A fine day should be chosen, not too hot, and with a trowel make your holes about fifteen, or even eighteen inches apart, according to your variety. In these place your plants, and fill up carefully, leaving the ball about

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three-quarters of an inch below the surface: press the soil down firmly, and go on to the next. Having completed the bed, with a rake smooth down the surface, and with pegs made of the common form, secure them in such positions as you wish them to extend their shoots. Water carefully, preferring, till the weather has completely settled, the early morning, for if watered at night a slight frost will be extremely fatal.

Calendarial Notes.—The following notes will apply both to plants grown in pots and beds; for the production of fine flowers for exhibition, the former method is generally adopted:—

February.—Those plants kept through the winter for the purpose of stock, from which cuttings are to be produced, may now, as recommended under the head of Cuttings, be introduced into a gentle moist heat, where, in a short time, they will speedily start. As soon as the shoots are long enough, remove, and place in pans in bottom-heat.

March.—The cuttings will now be taking root, and may be removed in order to make room for a succession. When perfectly established, take out the shoot to the length of two inches, thereby inducing side growth. These shoots will, if planted, strike root readily. Those already in pots, for pot culture, may receive a shift. Watch for green-fly, which must be destroyed by fumigation.

April.—Cleanliness, giving air and protecting, as well as affording all the room possible, are the principal instructions for the month. Still continue propagating, especially where good blooms are required for the July and August exhibitions. Keep your plants as hardy as possible, and by stopping obtain a dwarf bushy growth.

May.—This is a busy month with the amateur gardener. Previous to planting out, fumigate your stock. Planting may be safely commenced the third week in May, paying attention to colour and habit. For exhibition in July, pinch off the tops of your plants the second week, giving the final shift immediately before stopping.

June.—Plants for exhibition must be trained. The following instructions for this operation are from, I believe, Mr. Fish. The flat mode of training is to a circular, table-like, wire trellis, about fifteen inches diameter, with three strong feet to thrust into the soil, and of sufficient length to elevate the trellis above the soil about six inches for the weak growers, and eight inches above the soil for the stronger ones. It should be formed of circles, less and less towards the centre, with diverging rods to the outermost, to keep each circle in its place, at equal distances from each other. Three inches will be ample space between each

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circle. As soon as the plants are shifted for the last time, into their blooming pots, is the time to fix the trellises to each plant. The trellises should first have a coat of lead-colour, and afterward two coats of light green paint, to prevent them rusting, and to give them a neat appearance. When the plants are ready or large enough for training, apply the trellises by thrusting the three feet into the earth a sufficient depth to keep them firm in their places; then, as the plants advance in growth, train the shoots equally over the trellis, stopping them to cause a sufficient number of branches to cover the whole trellis, nipping off all the flower-buds till within six or seven weeks of the day of exhibition, if that happen early; but if in June or July, or still later, the flower will sufficiently expand in five weeks: this rule applies to every mode of training. The aim must be to let every part of the trellis, or bush, or pyramid, be fully furnished with bloom.

July.—This is a month when great care and attention is required by those plants in pots. All superfluous shoots, that is, shoots which cannot be trained to advantage, should at once be removed. Shade from fierce suns. Tying must be followed out: this must be done both systematically and neatly. For blooms for cut pans take out the centre pips; this will allow of the outside ones closing up the centre, and an even head of bloom will thereby be gained. Those in the beds must have attention in pegging down, removing all such shoots as crowd each other. The best peg, where it can be obtained, is the common bracken (Pteris aquilina). Water as required.

August.—During this month the plants will be exceedingly gay—the seedlings will, many of them, be coming into bloom. At once take away all that are inferior, propagating the varieties which show any improvement on existing sorts. Take cuttings of plants to store during the winter. The best soil for potting these will be good loam, leaf-mould, and sand.

September.—Gather seed immediately it is ripe, taking advantage of a fine day for the purpose. Any cuttings you intend keeping through the winter should at once be put in. Take notes of any new varieties which you may wish to cultivate; still peg down those out of doors, and water as required.

October.—All plants must this month be placed in their winter quarters, plenty of air but little water, freedom from green-fly and protection from frost, are all that will now be required until spring returns. One of the most suitable places for the verbena, during winter, is the top shelf of a greenhouse, near the glass, where they will be tolerably dry.

The following are as good a selection of bedding varieties as are to be obtained:—

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Purple King.—Good purple, and a free bloomer; the habit is excellent, and I think it is one of the best, if not the best purple bedder known.

Mrs. Holford.—Good white, fine bold pip, with noble truss, and a free bloomer.

Mrs. Woodroofe.—A strong growing variety, of good habit. Flowers large, bright, deep scarlet, and an excellent bedding variety.

Mrs. Trotter.—Brilliant scarlet, with a pleasing yellow eye, very free bloomer. The habit is dwarf, and very good.

Lord Raglan.—Deep scarlet, with lemon-coloured eye, a strong grower, good for large beds, and very effective.

Defiance.—Bright scarlet, an old variety, but for bedding purposes stands high in estimation.

Joan of Arc.—Rose, with light eye, a good flower, and blooms very well; effective.

Blue Bonnet.—Light blue, with large truss.

Where a greater variety is required, the following will be found useful additions, but for ordinary purposes the above will be found sufficient:—

Venosa, a distinct species, raised from seed very readily, and when true is of a very pretty mauve colour; Sir James Outram, Ariosto, Rosy Gem, Etonia, Cyclops, Crimson King, Cardinalis, Perfection, Crimson Perfection, Lady Havelock, Evening Star, Charles Turner, Bedding Purple.

TWELVE GOOD VERBENAS FOR POTS.—Blue Bonnet, Souvenir de l'Exposition, La France, Mariette, Lady Turner, Madame Zoudier, Etoile du Nord, Moonlight, Lady Palmerston, Madlle. Nodit, Lord Raglan, Madame Adolphe Weik.

TWELVE GOOD VERBENAS FOR CUT FLOWERS.—Geant des Batailles, Eole, Brightonia, General Simpson, Cupid, Standard Bearer, Henriette Huet, Venus, Lord Raglan, Evening Star, Mrs. Woodroofe, Black Prince.

THE PETUNIA.

A WEEDY plant most certainly, and there are few flowers which have so obstinately refused, even though great care has been bestowed in its cultivation, to improve in texture. Changes of colour we get it is true—splendidly marked specimens are in cultivation, striped, blotched, and shaded—yet with all these improvements, the petals maintain, with a most provoking obstinacy, a very great want of substance. As a florists' flower, I doubt if ever the petunia will rank high; yet in colour and

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marking there are points which, for effect, we find only in exotics. Some of the double new varieties are exceedingly beautiful, and it must be to this class we shall in future look for improvements.

The first petunia which came into Europe was the *Nicotiana nyctaginiflora*, or common white variety. This was about the year 1820, and a description was written of a specimen by Sweet, which he trained against his wall to the height of, I think, eight feet, where it bloomed for more than six months out of the year. This variety was for many years a great favourite, and was to be seen at every exhibition in the kingdom. After a while a new variety, a purple, was imported; and although I am not quite certain, I believe the seed from which this variety sprang was sent from South America. Of course hybridists soon put their powers into operation, and various shades of colour were obtained. Of late years numerous blotched or striped varieties have been exhibited, but these have proved so inconstant, as not to be worthy of receiving a name. A few years since, the first double petunia, Imperiale, a small white variety, was raised, and since that period there have been upwards of twenty double varieties of various sizes and shades.

Soil.—Good loam, leaf-mould, well-rotted manure, and sand, are the best ingredients for the growth of the petunia; of the two former the quantity should be about three parts, sand being added accordingly as the loam is sandy or otherwise.

Seed.—The best time to sow the seed is in spring, in pans or boxes, using moderately light soil and silver-sand for the purpose. Sow evenly and thinly, and cover lightly: a piece of glass placed over the box is attended with advantage. Your seedling plants will soon make their appearance, and when they are large enough to handle, transplant them round the edges of pots. Here they may remain for about a month, when each should be potted separately into a forty-sized pot, using soil as recommended. Clean pots and an abundant drainage are also indispensable. By about the middle of May, the plants will have attained a considerable size, when they may be removed out of doors, and placed in beds, protecting a little at first. Here they will, by an abundant bloom, form a great attraction. Avoid crowding the plants; and, if after your plants are in bloom you find them too close, remove the most worthless. In the case of novelties, propagate by cuttings at an early opportunity. If you have a greenhouse, there are few plants more useful during the summer season for decoration. For this purpose, repot your young stock, keeping them as close to the glass as possible. In April they will again be ready for another removal, and may be placed in larger sized

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pots, using drainage. The plants will be much benefited by having their shoots stopped to induce a short, vigorous growth. Some persons never use any other supports but a single stick, while others train them somewhat similar to a Thunbergia. I prefer the former method. Frequent stopping is, however, the only means to allow of this being practised. In June your plants will begin to bloom, and will be found very useful in supplying the places of such greenhouse plants as it is desirable should be removed into the open air; indeed, nothing is more suitable to occupy the greenhouse in summer than the petunia, balsam, and other tender annuals. In order fully to develop their colours, shading should be given; this, with a free admission of air, abundance of water, and judicious training, will be all the care required.

Propagation by Cuttings.—Although the method of sowing seed is more advantageous, in many points, than that of propagation by cuttings, still there are many instances where it is desirable to perpetuate the variety; for this purpose cuttings may be taken any time from March to September. Bottom-heat will be found necessary if cuttings are wanted before the end of May, but after this season they may be readily struck in an ordinary greenhouse. A simple and effective way is to take a quart pot, and having placed a small quantity of drainage and good compost, cover over with silver-sand to the depth of a quarter, or even half an inch. This will fill up the pot to about one-third of its depth. Plant your cuttings in the soil, allowing them to penetrate the sand and touch the soil, although they should not go far into it. Over the top place a flat piece of glass. The sides of the pot will afford a shade for the plant; and I have found many subjects, rather difficult to strike in any other method, succeed in this manner. Be careful, however, not to plant too closely. When your cuttings have taken root they may be repotted and treated as other stock. When winter approaches, any varieties you may wish to preserve should be cut down. If this is done in August, and not too close to the earth, a number of small shoots will be formed; and by keeping these in a moderately dry state, and near the glass, they will be the foundation of fine specimens for the ensuing season.

In exhibiting the petunia, much must be left to the judgment of the grower; plants, however, should be struck in the autumn and kept through the winter. Stopping and potting must be carried on till about a month previous to the date when you desire to exhibit. The plants must be carefully trained, using nicely-painted sticks for this purpose.

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THE POLYANTHUS: ITS PROSPECTS AND RETROSPECTS.

OPEN GROUND *versus* POT-CULTURE.

Is it then presumed "the poor polyanthus," that so lately regaled us with its peerless beauties, is about to leave us, and go amongst "the wreck of things which were?" In this northern district we would hope for better things, and that this pretty little flower, the pattern of neatness and early favourite of the florist, is not yet doomed to so sad a fate—that it is only a mistaken surmise of those who still pertinaciously adhere to the sickening process of pot-culture, instead of the more natural and health-dispensing culture of the open ground, where we will guarantee that the polyanthus (properly nurtured under the constant influences of the common air, soil, and sunshine), will always be healthy and strong, and soon shake off that *sickly hue*, the inevitable result of long confinement within the narrow limits of the pot and frame, where we have long been persuaded there generally exist, in rank abundance, all the ingredients necessary for engendering premature disease, and consequently decline. As a guide, Mr. Editor, for the culture, the *safe culture*, of this neat little herald of spring, we need only take a glance at its hardy originals, the cowslip and primrose, the latter blooming so sweetly on the sandy brae, beneath the temporary shade, it may be, of the bracken and the hoary hawthorn, or by the woodland pathway, similarly guarded from the fierce rays of the sun; the former luxuriating mid the thick herbage of the common marshy meadow, or, like Burns' mountain daisy,

> "Beneath the random bield,
> O' clod or stane,
> Adorning the histie stibble-field,
> Unseen—alane."

In fact, Mr. Editor, with those originals for our example, we almost find that, by open-air cultivation, the polyanthus can be grown in *any* locality possessing free air and shaded aspect, even—

> "In the lonest vale and on the wildest mountain."

For, thus nursed—

> "The sma'est bield, when winter blaws,
> Will fence its hardy blossom,
> And to th' slightest blink that fa's
> 'Twill spread its bonny bosom."

I cannot say we have lost any varieties at all from culture alone; and if such flowers as Squire Ray, Lord Lincoln, Lord Brougham,

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etc., have made their *exit* from the pots of your midlanders, we of the north here, by the frosty shores of coaly Tyne, rejoice to think we still retain on our borders, in full luxuriance, our old favourites (which, when well-grown, are bad to beat), viz., Lancer, Alexander, George IV., Northumberland, Bertram and Britannia, Black and Gold, Queen of Tyne, Formosa, Pillar of Beauty, Eliza, Black Diamond, Tartarus, Taylor's Mary, King, Bessy Druker, May Garland, and though last not least, Highland Mary, Exile, Flower of the Flock, and Virginia. Trusting I may not have trespassed too much on your space with this rambling account, I remain, sir, your very obedient servant,

Tyneside, Oct. 12th, 1860. ALEXANDER.

P.S.—Perhaps I should have given your readers some more account of our soils and mode of management, times of sowing, transplanting, etc. These, if you have no objection, will form the subject of some future paper, as I have leisure. I may as well observe just now, as a general good hint, that the polyanthus for show purposes ought never to be removed after planting-time, in early spring, from its original position until the time of bloom, when it may with safety be removed to a cold frame, *but no longer* than until it has done blooming, and quickly restored to the border. I have also some remarks to make on the culture of the fickle ranunculus, but these, if agreeable, may also be deferred to a future opportunity.

LITTLE THINGS.

THE education, or as it might, perhaps, be more advantageously termed, the self-culture of the gardener, is a subject demanding more attention than it at present receives. It is true that there are several gentlemen (and we heartily wish them success) who are advocating the formation of colleges, or institutions, where gardeners may be prepared, by a course of instruction, not only theoretically, but also practically, in order that, after a time, they may be examined, and receive a certificate of their ability. We do not for a moment doubt the advantages to be derived from such a course, or hesitate in supposing that the holder of such certificate would be sought after eagerly, and at a good remunerative salary. Still there are drawbacks to such a system. Can a working gardener, at any period, more especially in his youth, when impressions are most easily received, afford to give, not only a large portion of time, but also a certain sum of money, which, although it may seem small in comparison to the probable

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advantages, is nevertheless an insurmountable barrier? We think not.

It is, however, in the power of most working gardeners, especially those who are young, to improve themselves, and in the interval, when not engaged in his vocation (for every man of a contemplative mind must learn much while pursuing his calling), by reading and by conversation so to cultivate their mind as to reap incalculable advantages. At this season of the year, when nights are long, a course of reading should be diligently commenced.

The notice bestowed on little things is always a step in the right direction; few men, however, are aware of the importance of trifles. Many ambitious young men start in life determined to achieve something great, or to obtain high distinction before they die; but they fail, and the reason why they fail is, because they despise little things. The alphabet of success consists of trifles, and without a knowledge of them the great works of nature are a sealed book. The blowing of a soap-bubble, the rising of a kettle-lid, the flying of a kite, and the playing with a magnetic needle, have all led to the most astounding developments in physical science.

And yet in horticulture thousands of facts are daily occurring to some one or other of us, which ought to be of great benefit, did not the observer regard them as too trifling; and horticulture ought to produce as great a number of philosophers as any other art, because there are few branches of science but may be made to serve its turn. Its influence in this way has been partially developed, for it is a well known fact, that most of our great men have and do rank among the best patrons of gardening. Men who have risen from the ranks, and become good gardeners, or, indeed, clever in any other science, always are to be found the associates and companions of the nobility and higher classes.

One of the best illustrations that can be offered is Sir Joseph Paxton, once a garden labourer in the Horticultural Societies' gardens, where it is said he commended himself to the attention of the late Duke of Devonshire, by the judicious arrangement of a bouquet; every one knows that Sir Joseph must have been a close observer of little things. This is clearly indicated, not only by his whole life, but also by his successes. He had noticed the peculiar formation of the Victoria regia; he had studied the structure, and the wonderful strength obtained in the formation of its leaf, and these little things, although they must have passed under the notice of hundreds, sank deeply into the mind of the prince of gardeners, ending in not only success, but also in honour. Mr. Smiles, in speaking of the plan, says, "its novelty, and

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remarkable suitability for the purposes intended, at once secured its adoption. The first sketch was made upon a sheet of blotting-paper, in the rooms of the Midland Railway Company, at Derby, and this first rough sketch indicated the principal features of the building as accurately as the most finished drawings, which were afterwards prepared. The great idea of the Crystal Palace was as palpable on the blotting-paper as if it had been set forth in all the glory of water colour and gold framing. Was it a sudden idea, an inspiration of genius flashing upon the mind of one who, though no architect, must at least have been something of a poet? Not at all. The architect of the Crystal Palace was simply a man who cultivated opportunities, a laborious, painstaking man, whose life had been a life of labour, of diligent self-improvement, of assiduous cultivation of knowledge. The idea, as Sir Joseph Paxton has himself shown, in a lecture before the Society of Arts, was slowly and patiently elaborated by experiments, extending over many years, and the Exhibition of 1851 merely afforded him the opportunity of putting forward his idea—the right thing at the right time—and the result was what we have seen."

We need not tell of the hundreds of instances of men who, by patient and persevering industry, have worked themselves to fame, to honour, and to wealth. It is true that—

> "There is a tide in the affairs of men,
> Which, taken at the flood, leads on to fortune."

There are instances where lazy folks have contributed to the inventions; generally, however, they must have been most observant, chance never could, or never would have developed such results.

Let us, therefore, take every notice of little facts, these are far before great theories. Consider no fact beneath your notice; value no one's opinion further than it may serve as a guide to positive facts. Opinions and theories have been the bane of horticulturists, originating quarrels and bad spirit.

COSMOPOLITE.

REVIEW OF THE AURICULA BLOOM.

DEAR SIR,—I herewith forward a continuation of my notes on auriculas.

WHITE EDGES AND SELFS.—*Taylor's Favourite.*—One plant with nine, one ditto with eight, and a maiden with five pips, all very fine, being a cold season; it was very superior to what I have generally bloomed it, as when the weather is dry, and much sun, it is very apt to flag and curl back; a fine sort, but requires great

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attention to bloom it first-rate; with me, very shy of increase, though it makes a large and handsome plant, possesses a neat, circular, golden tube, eye dense, ground black and regular, solid white margin, but rather pointed.

Taylor's Incomparable.—Two plants with five pips each, its maximum number, never having known it to produce more. A maiden plant with three pips. In some respects I consider this superior to the first-named variety, possessing a much better outline, and extremely rich in the ground, being a dense purple; the pip is much larger, apt in some seasons to be too heavy in the ground. Trusses well, and makes a handsome plant, rather late in blooming; although an old variety, extremely scarce and difficult to obtain.

Taylor's Glory.—Rather an uncertain sporting variety. I grew it many years in doubt whether it was worth frame-room, being stiff and hard to open, and much frilled on the margin, yet it can be first-rate when it will take a deal of beating, as it has all the properties of a first-class white edge. Many that are termed white edges should have rather been called buff edges, having the pounce so thin on the margin that the slightest exposure to damp or wind destroys it altogether, in which state it is the most unsightly auricula to behold; the variety under notice, to be bloomed well, requires much more exposure than some others during blooming, and strong treatment, *i.e.*, rather a liberal supply of liquid manure. Two plants bloomed eight pips each, and two maidens a three and four, all first-rate, flat and circular. Trusses well, and possesses nicely formed foliage; plant rather loose and open; a free grower.

Leigh's Earl Grosvenor.—One plant produced fourteen pips, thinned out to nine, were very fine, as this old sort mostly is, being, as I think, a model of a white edge; fine, rich coloured, circular tube; eye dense, well proportioned; ground black, margin fine, pip large, truss well formed, and continues longest in bloom of any I have in its class; densely pounced foliage, and makes one of the largest and most handsome plants we have, and blooms from offsets, however small, which should be pinched out, or it is apt to destroy them.

Lightbody's Fair Maid.—A very robust grower; makes a large and handsome plant, nicely pounced foliage; although plentiful in stock, and fine plants bloomed, not one was equal to any of the before-named, many sorts are deficient in farina; but in this variety it seems to be over-abundant, and is scattered over the ground, so as to give it a gray, mottled appearance; the tube too faint in colour.

Summerscales' Catherina.—A very chaste, neat, little flower;

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tube small, circular, colour good, eye dense, as also the ground. black margin, well pounced, even and good outline, pips small, truss weak; makes a handsome plant, with richly pounced foliage.

Heap's Smiling Beauty.—A very large, black and white variety, and a great favourite in some districts; but, from some cause or other, it has never shone with me, being coarse, and far too heavy in the ground. Truss tolerable, and abundant in pips.

Leigh's Bright Venus.—An old and curious variety to deal with; it can, and does sometimes, produce a flower that would be difficult to beat; it can also be one of the most unsightly auriculas ever beheld. Still we have some sterling qualities in this fictious old sporter; I question whether there is a tube equal to it in any other, being a very deep, golden, rich, waxy, circular cup, slightly fluted, or elevated, above the eye, so as to render it an exquisite finish in that part of the pip, which is large, well proportioned, and excellent outline; truss good. Of course these latter remarks apply to the goddess in good humour, as she happened to be this season, with seven pips all equally good.

It is somewhat remarkable, that although I have repeatedly raised seedlings from all the sorts above noticed, excepting Smiling Beauty, I have not had one white edge. From Venus I had a curious and novel progeny—a grey edge, with deep orange-coloured ground, with excellent properties throughout; but lost it, as I suppose, by trying to get seed the first year; from the same batch a dark ground, with bright yellow margin, similar to the lacing of a polyanthus; a yellow self, and many other singular varieties not worthy of notice. Though there is much disappointment in raising seedlings, it is nevertheless very interesting, from the vast variety that are often produced from the same plant. I am of opinion where seedlings are raised, they should be kept quite apart from selfs and alpines, and even with this precaution a great majority will be selfs. From Colonel Taylor I got up about thirty plants, from a pod of seed, all selfs. From Imperator many edged varieties, but none as yet.

This season I have got seed only from white edges, viz., Incomparable, Glory, and Earl Grosvenor, excepting a small head from Lord Lee, which I thought of trying for the sake of its colour.

SELFS.—In this class I have but three old named varieties, viz., Barker's Nonsuch, Berry's Lord Primate, and Lord Lee. Having produced from time to time so many seedlings, I have not cared to grow them. Barker's Nonsuch were very fine in three plants; one I suffered to carry thirteen pips. This is a very rich dark blue ground, solid and circular eye, well proportioned, flat, and smooth-edged pips, full average size, and trusses

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well. Early in bloom, and requires much care to keep it any length of time in showable trim, being apt in a damp season to freck with mildew.

Berry's Lord Primate.— A small, neat, black flower, beautifully circular yellow tube, dense eye, pip flat and even, very circular, requires thinning out early and abundantly. I have known it to produce above a score of pips on one stem.

Berry's Lord Lee.—Though classed as a self, and has been allowed prizes, it ought rather to be classed as an alpine; as although, when in good trim, the eye approaches to white, there is no farina upon it. The same may be said of Flora's Flag and Lady Flora Hastings, only that the two latter possess a good clear white, though not pounced. I fancy the colour has given it a place, being a rich scarlet, and certainly very attractive. In describing my seedlings in this class, I shall be compelled to leave many unnoticed, having such a number. Half of them have not been noted; therefore, for the present, I must confine my remarks to a few.

J. F. Wood.—From the same batch as Splendid, green-edged seedling, previously noticed. A fine large dark-blue flower, tube rich yellow and round, eye dense paste and nicely balanced, outline smooth and well filled up in the edge; bloomed this season with nine pips, and continued in bloom nearly three weeks. Being a large flower and handsome, truss was very attractive and much admired.

Velvet Beauty.—An extreme dark rich flower, raised from Booth's Freedom, medium-size pip, tube small and fine, eye well pounced and circular, and nicely proportioned—a quality often deficient in this class, especially when the tube is small, as it then leaves a wide space to be taken up in the eye, to render it sufficient for the ground. I delight in a small tube, but not meagre. The prevailing fault in many selfs, old and new, is in their possessing a large tube and small eye, so as to render great disproportion, the ground forming above half the pip. I think in this class we shall never have to complain of the eye being too large. Many selfs, too, are apt to be what we term frilled and serrated. Such should not be retained after two seasons' trial. Overgrowth will sometimes produce this in good sorts for a season or so.

I consider Othello the model for guidance; decidedly the best self I have seen; the only fault I can find is weakness in the footstalks, which renders it difficult to truss.

No. 12-57.—Parentage unknown. A rich puce-coloured variety, fine circular flat flower, good in every respect save one, viz., the eye being deficient in farina, giving it rather a flannelly appearance, like the crack Metropolitan—a fault I never saw cor-

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rected in that far-famed old and high-priced sickly variety, which requires to be fresh imported every season to have it in anything like blooming condition. They are fortunate, indeed, who have the same plant giving two good blooms in succession.

My notes on selfs that bloomed for the first time this season are as follows:—

No. 1-60.—A fine closed self, tube rich orange, paste solid and circular, outline good and smooth.

No. 2-60.—Dark maroon, very flat and round, paste good and circular.

No. 4-60.—Extra large, deep blue, tube and eye excellent, rather cupped.

No. 6-60.—Dark, large and good, truss extra fine, being a much stronger plant than any of the above.

No. 7-60.—Extremely rich velvety blue, flat and circular pip, tube deep golden, very round and small, eye dense, and nicely proportioned. This variety only bloomed one pip, being a remarkably small plant, which it still continues to be. If I can get it strong, and it trusses well, it will be all that can be desired in a first-rate variety, being decidedly the best pip I ever saw in a self.

I believe, my dear Sir, this concludes my notes for the present. If spared till another season, I hope and feel fully confident in being able to report some first-rate things in seedling polyanthuses.

In the interval I will endeavour to give a few hints on the culture and general management of the auricula.

Let me again hope there will be something done during the coming winter towards a spring show next season. Several gentlemen who have communicated with me are most anxious, and are already preparing for the event.

Dennan Street, Radford, Oct. 15th. SAMUEL HAMMOND.

TRITOMA UVARIA.

FEW plants have a greater claim on our attention for autumn decoration than this beautiful plant. Its adaptability for general cultivation is too well known by many to need any comment; but I think it is not yet so extensively grown as it might be, few flowers are less injured by frost, while its long continuance of bloom, and its gay colours, render it most useful and ornamental. I think it might be largely grown in parks, and for borders along carriage drives, and thus, with other things, relieve the generally monotonous appearance of these places; it would form

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an excellent contrast to the pampas grass (Gynerium argentum), now becoming so universally known and grown. It is, however, not less useful for large beds in the autumn, whole beds having a grand effect when mixed about with beds of dahlias, hollyhocks, asters, and other large-growing plants; in fact, no garden should be without it. The plant was first introduced about a hundred years ago, yet we find but little mention made of it in any old gardening works, probably the taste then for ornamental planting had not reached such a climax as it has in the present day; be this as it may, we find it grown on a very limited scale till within the last few years. We believe that since the time Kew Gardens was improved, some twelve or fourteen years ago, that this plant has been most conspicuous there, and was known under the name of Kniphofia, since then there has been a growing want for it by the public. The severe and long winter of 1859 and 1860 did much injury to the plant in many places. It may be considered an extremely hardy plant, but I believe it suffers more from wet than frost. I have found that the best way to winter the plant is to take them up and give them frame-room; many may argue that this is unnecessary, but with our precarious seasons it is making doubly sure. I have suggested to many the propriety of taking such care of them, and have been thanked by all for the advice. Many persons last year, who had a large stock, lost the whole of them, by leaving them out of doors unprotected. We did not lose half a dozen plants, having taken ours up. We usually take them up about the end of October, parting them according to the number of plants required, and after preparing some tolerably open soil, we pot them into moderate sized pots, with plenty of drainage, and afterwards put them into a deep frame or pit. I should also observe, that as the leaves are often broken and droop, we prefer putting a stick to each, and tie the leaves up to the stick in two or three places; this in a great measure protects the heart of the plant, looks neater, and takes up less room; the plants need not be watered for a week or two; by a little protection during the winter, in severe weather, and keeping dry, the whole of the plants may be secured, and early in March they may be planted out; when required to bloom, they like a rich, yellow, loam, but succeed well in almost any garden soil. The foregoing hints may be useful to many unacquainted with the natural habit of the plant, and may, perhaps, dispel the idea that there is any difficulty in growing it, an opinion which too many people are inclined to think exists in the growing of all plants, when in reality there is none.

Woodlands Nursery, Isleworth. JOHN DOBSON.

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WHAT MAY BE DONE WITH A SMALL BED OF TULIPS.

SIR,—With much pleasure I have read the commencement of an analysis of tulips exhibited, and prizes taken by competitors at the great national shows, held from the first exhibition up to the present year. For the encouragement of amateurs, and to further the good work of your correspondent, allow me, without any ostentation or pride, to give you a list of the number of prizes I have obtained from a small bed of tulips, containing sixty rows.

1850, *May 28th.*—At Manchester and Belle Vue, eight prizes in classes.

1851, *May 27th.*—At Derby, 3rd, 7th, and 8th; and at Nottingham, 1st, 3rd, 5th, 3rd, 7th, 1st and 4th prizes in classes.

1852, *May 27th.*—Great National, Birmingham. Two premiers. In classes, 1st, 2nd, 6th, 4th, 6th, 6th, 6th.

1853, *May 25th.*—Great National, at the Corn Exchange, Nottingham. 2nd pan of twelve dissimilar blooms, 4th and 8th, in classes.

1854, *May 24th.*—Great National, Regent's Park, London. 1st pan of twelve dissimilar blooms. In classes, 3rd and 4th.

1855, *May 29th.*—Great National, at Cambridge. Only six flowers in bloom. In classes, 2nd, 5th, and 6th.

1856.—Great National, Crystal Palace. No flowers in bloom. At Derby, 8th pan of six. At Nottingham, *June 3rd*, Arboretum Show, open to the Midland Counties. 4th pan of twelve dissimilar blooms, 2nd pan of three flamed bizarres, 1st pan of three feathered byblœmens, 1st pan of three feathered roses, 2nd pan of three flamed roses, and 3rd pan of three seedling breeders.

1857, *May 29th.*—Great National, at Manchester. 5th pan of twelve dissimilar blooms, 4th and 5th pans of three flamed roses. *June* 3rd, at Nottingham. 1st pan of twelve dissimilar blooms, 1st pan of three flamed tulips, 5th, 3rd, 6th, and 8th pans of flamed tulips.

1858, *May 27th.*—Great National, at Sheffield. 3rd pan of twelve feathered and flamed, two in each class. In classes, 4th prize of three flamed tulips.

1859, *May 20th.*—Great National, at Slough. Pan of twelve dissimilar blooms, placed 2nd or 3rd, but afterwards disqualified by a person showing the judges a small band of paper on one of the flowers. (See "Midland Florist.") In pans of three, 3rd prize. *May 25th*, at Nottingham Exchange Show. 1st prize of twelve dissimilar blooms, 1st prize, three feathered tulips, 3rd and 5th

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pan of three flamed tulips. Two first-class certificates for rectified seedlings. *May* 31*st*, at Derby. 5th pan of six tulips, 1st prize for the best seedling breeder.

1860, *May* 24*th*, Great National, at Cambridge. No flowers in bloom. *May* 30*th*, at Nottingham Exchange. 2nd prize, pan of twelve dissimilar blooms; 1st prize, pan of three feathered tulips, 5th and 6th flamed, 3rd prize in a pan of three feathered flowers. *May* 31*st*, Midland Counties Tulip Show, held at Bramcote. 1st prize, pan of twelve dissimilar blooms, two feathered and flamed in each class. In single specimens, in classes, 1st prize, flamed bizarre, 3rd ditto, 2nd prize, feathered bizarre, 3rd prize, feathered rose, 4th, flamed rose, 7th ditto, 4th prize, byblœmen, seedling breeder.

Radford Vicarage,
June 13*th*, 1860.

Yours, truly,
SAMUEL CRESWELL.

ON THE CULTIVATION OF THE GRAPE-VINE.

MOST of the existing works on the grape-vine treat principally upon its cultivation by forcing during the winter, or early spring months, or by training upon open walls. The former is very expensive, and the latter only succeeds in the southern parts of England, and there only partially. The method of cultivation herein described is an inexpensive one under glass, and by which good crops of fine grapes may be grown, and be had in perfection from June to Christmas. This untoward season 140 bunches of fine fruit have been cut from eight vines in a house only 30 feet long by 12 feet wide, and equally good crops have been cut from these vines for three years in succession, they being only planted in the spring of 1857.

For building the house or houses, take Rivers's instructions for orchard-house from his admirable little book;* with this difference, let the back and ends be of brick (one or both ends may be of glass, if expense is no object); let the back wall be two feet higher than is recommended for orchard-house, which will cause the rafters to be required one foot longer. This gives a sharper angle to the roof. Let the front be of boards, with flaps all the length, for air; put doors in back wall, or if built against a dwelling-house, or an existing wall, let a few of the top panes be put into frames, with hinges to open and shut at pleasure, and put a small door at each end, near the back of the path, to give a current of air through, from end to end, when required, as free

* "The Orchard-House," by T. Rivers, Sawbridgeworth.

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and good ventilation is indispensable; let the border extend four feet within the house, and at least nine feet (twelve is better) in front, and in place of the back border, as in orchard-house, put in a brick flue nine inches wide and twelve inches deep, the fire-place at least fifteen inches below the flue, behind or against the back wall, at one end, and the chimney also behind or against the back wall at the other end, the flue running along the north side of the path, with a turn (not too sharp) at each end to join the fire-place and chimney. Over this flue may be erected a small stage for greenhouse plants, if desired; or if the grapes are not wanted to ripen before the end of August or September, the flue may be dispensed with altogether, providing the early varieties of grape-vines are planted which will be mentioned hereafter.

To have ripe fruit early in June another small house will be needed. This to be only nine feet wide, with the rafters fourteen feet long, which will give an angle of about forty-five degrees, which will cause the sun to have greater power on the vines early in spring; the flue to be against the back wall, to run from end to end, and back again over the top to a chimney over the fire-place. The top of this flue should be four feet high from the path, the inside border to be four feet wide and three feet high from the sunken path. The trellis should be of galvanized wire, placed lengthwise of the house a foot or fifteen inches apart, and run through galvanized iron pins nine inches long, screwed into each rafter, with eyes at one end, so that the wires may be not less than ten or more than twelve inches from the glass.

The borders, if the subsoil be sandy, so that the wet will drain off perfectly, may simply be dug out to the depth of eighteen inches; and if the surface-soil is pretty good, may be filled in with a mixture of two parts of the surface-soil, two parts rough turfy loam, two parts rotten farmyard dung, one part old plaster or mortar, well mixed together, in a rough state, and to which may be added with benefit some broken bones and wood-ashes; and if the surface-soil and loam are inclined to be stiff, add one part road scrapings or river-sand. Should the subsoil be clay, or at all retentive, a drain should be made along the middle of the border, two feet six inches or three feet under the surface, and the bottom sloped each way to eighteen inches deep, at the sides of the border; then a few inches of large brickbats spread over the bottom, and upon these a coat of smaller pieces of brick, and on this the border soil; this should lie at least a month in the border to settle previous to planting.

The vines must be planted inside the house at any time before March. Good strong canes should be procured in pots, the ball to be removed from the pot, and the drainage to be taken from

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the bottom, then the ball put into a hole previously made, so that the border soil will cover the upper roots to the depth of about an inch. Some writers recommend all the soil to be shaken from the roots; others to insert the ball or roots some distance from the place from which the vine is to grow, covering the stem one or two feet with soil. Neither of these plans are good, the former checking the growth, and the latter sometimes causing the vines not to start well for a year or two, or until new roots are made from the eyes nearest the surface; whereas, when the ball is planted entire, and the vines are strong, a bunch or two may be taken from each the first year, a fair crop the second, and a full crop the third, after planting. The distance from vine to vine should be two feet six inches, or three feet; but if greenhouse plants are to be grown to any extent in the same house, four feet should be the distance. Give a moderate watering after planting, which should not be done in frosty weather. Continue to water very moderately in open weather, if the soil becomes at all dry, providing the planting is not done before March; if done earlier, no water should be given until March, for fear of injury to the roots by frost. If strong vines are planted, say from nine to twelve feet in length, they should be cut down to two-thirds or half their length, according to their strength at the time of planting, or as soon as they are received, if the wood be well ripened. B.

(*To be continued.*)

THE PARSNIP (*Pastinaca*).

This valuable root is not grown so much as it ought to be, considering its nutritious qualities, and its use as a winter vegetable. Parsnips are chiefly cultivated in Jersey and Guernsey; in the latter place they are grown to great perfection, the soil being peculiarly suited to them. They will, however, thrive in any deep land; but the most favourable to its growth is the soil resting on granite or sienite. On poor sands, it is apt to come strong and woody. Fresh broken grass leys produce large crops; but from land in which potatoes or turnips have been grown the previous year much finer roots are obtained.

The parsnip requires the soil to be deeply dug, and well manured. If the land is at all clayey, half-decayed stable-dung will improve the texture; it should be well incorporated with the soil, at a depth of from six to twelve inches, to prevent the roots forking. On light lands of a loamy character, guano and bone-

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dust will produce very fine roots, much finer than can be obtained from stable-manure. Five cwt. of guano and three cwt. of bone-dust per acre will be a sufficient dressing, applied in the month of February, and worked into the surface of the soil with a cultivator previous to ploughing or digging.

Parsnip seeds are sown broadcast and in drills, at the rate of three or four pounds per acre. The drill system is to be preferred, as it produces a more regular crop, and gives greater facility in thinning and hoeing. The plants should not stand less than twelve inches distant each way, and, with clean and frequent deep hoeing, a good crop may be always obtained. The seed, before sowing, should be soaked in water for a night, and strained off the following morning, and mixed with sifted ashes or dry sand. One pound of seed to a bushel of sand is a good proportion, either for drilling or broadcast. If the weather is not favourable for sowing, the mixture may be kept a fortnight, by turning it every day, taking care not to let it dry. If possible, the ground should be moderately moist when the sowing takes place, as seeds prepared as above, if sown on very dry land, in dry weather, are apt to be destroyed.

The sowing should be done in calm weather, from the second week in March till the first week in April, according to locality. The young plants are very hardy, and will stand a great deal of bad weather.

The seed should be of the previous season's growth; if two years old it will not vegetate, although it may have been kept dry, and look well.

The crop may be taken up in the latter end of October, and in November frost does not injure them much if left in the ground. It is a root that, if stored dry, will keep well till April. It would, however, be preferable to take them up at the time named, as they will be at hand if severe weather should set in.

The average weight per statute acre in the island of Jersey is about ten or eleven tons, but with a more careful cultivation a much greater average would be obtained.

Parsnips are much used in these islands for feeding and fattening cows, pigs, and, if boiled, poultry, with great rapidity. One thousand parts of parsnips, according to Sir H. Davy, afford ninety parts of saccharine matter, and nine parts of mucilage, which accounts for its butyraceous and fattening qualities. In selecting parsnips for seed, great care must be used to take only those that have a *very small* and deeply sunken eye. The root need not be large, but it is of importance that the parsnip should be well-shaped, and free from lateral roots. They may be planted the first favourable weather after Christmas, in rows three feet

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apart, and twenty inches distant in the row. A covering of sand or ashes, an inch thick, will prevent the attack of slugs, etc.

Market Gardens, St. Lawrence, Jersey. JAMES LEVESQUE.

P.S. The above article was written principally for those who intend growing them extensively, but the intelligent amateur will, I think, derive sufficient instruction from it to grow them well for his own table use.

OF THE CONSTITUTION OF FLOWERS.

OF all the discussions on, and reviews of, Mr. Darwin's book "On the Origin of Species," none are likely to be of so much value to the world as those on the metamorphoses of plants. For this reason, although in the heat of debate but few practical hints have been thrown out for the guidance of the florist, we deem it our duty, as we proposed in the number for April, again to recur to the subject, at least so far as it relates to the "*Constitution* of Flowers."

We say "constitution," because it is the only plain English term which can at all include the matters to which we would now call our readers' attention, yet which will at the same time restrict them within certain defined limits.

In the diagnosis of a disease, for the prognosis of its course and suggestion of remedies, the true physician studies the "constitution" of his patient; that is to say, he notes the idiosyncrasies of the individual as modified by the inherited tendencies of the family, for he knows that without this any attempt on his part to "exhibit" medicines would be mere empiricism and quackery. Now, what is true of man diseased is true of man in health; to get from him the desired result of mental or bodily labour, you must feed him according to the peculiarities of his organization. And what is true of man, is true of that which nourishes him, whether animal or vegetable matters.

Suppose your human patient wasting in substance and wanting in internal heat, as in consumption, more food of the kind he is now receiving would be useless, for he does not digest even that which he takes at present; but you fly to cod-liver oil, because it is easily assimilated, and its carbon combining with the oxygen taken by the lungs, and burning in the blood, saves much conversion, and raises the heat requisite to enable all the other functions of digestion and assimilation to go on properly. But suppose that your vegetable patient is growing thin and weakly, you do not heap the earth about it, for perhaps it is "sick of the

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soil," nor do you feed it with oil, for it gets sufficient carbon from the carbonic acid in the atmosphere and the soil, and does not burn it, but stores up the greater proportion in wood and seed; yet internal heat it too must have—low as that heat is as compared with that of the superior animals—to carry on its functions of assimilation and absorption; and this it obtains from that which the animal has used and rejected, the earthy phosphates and nitrates—in other words, manure.

Now, this principle of absorption and rejection is the axis on which the life of the universe turns; the plant living on the rejected matters of animal existence, and the animal on the rejected and the absorbed of vegetable life. Furthermore, the rotation of crops depends upon the growing of one crop after another which has rejected that which the former assimilates. And the feeding of animal life, too, ranges itself after the same manner, the herb-eater being devoured by the flesh-eater, and the flesh-eater returning once more to the air and the earth the food for the herb, each after its own idiosyncrasy travelling the road which brings it to perfection, to end in death.

Thus the forces of life are, as it were, complemented, and work together in harmony, each in its turn gaining the mastery, and presenting to the superficial observer those phases of vitality which have been termed the "battle of life," or the "struggle for existence." So, as like circumstances arrive, like results are effected to those which, perhaps many years previously, were enacted, happily named the law of inheritance, making the lamb at maturity a sheep, a Van Thol offshoot a tulip; not only so, but a sheep of the stirps (or race) from which the lamb sprung, and a tulip of the kind from which it was parted. Whence, then, come differences? is suggested to us. From those surrounding and internal influences, which subtract here, or add to there—influences of which we as yet but partially know the laws. The tulip of the day, be it Adonis or Queen of the North, is very different from the Tulipa gesneriana of the Levant, the foundation of all our garden varieties. Yet, could we retrace the steps by which these splendid flowers have gained their fame, we could reproduce a Tulipa gesneriana as readily as we could recover from man some of those identical phosphates which had been furnished to the wheat constituting his daily bread.

In one word, then, *the present is the* SUM *of all the past;* and this fact we should never forget, for in it lies all progress. Man is what he is through what he has been, the flower is what it is through the changes it has seen; and a half-perception of this truth has led to the belief that untended flowers go back to their native forms, and neglected peoples fall into their ancient savagery,

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which, however, is only true with a limitation, because it is difficult to destroy *all* the effects of culture in anything.

The proof of this fact, that the present is not a *repetition* but the *sum* of the past, has never been better illustrated than in the experiments of M. Fabre on Ægilops ovata (oval-spiked hard-grass), who by years of assiduous care and genial cultivation converted this coarse weed into wheat as fine as any grown in the south of France; while we have the authority of Galen for stating that neglected wheat degenerates into ægilops; to produce which result, Prof. Duval says it took M. Fabre twelve years, the seed continually throwing out forms more or less resembling its ancestor, which were as indefatigably eliminated from the better-developed sorts.

Taking this valuable experiment, then, for our pole-star—and it has been in part repeated by Professor Henslow—we may learn how to steer for any haven known or unknown. Wheat and hard-grass had long been distinguished, the former being sown for food before the Pyramids were built, and Galen and his father has seen the relation of the two in the degeneracy of the former; but the *proof* of the inheritance had never been forthcoming, because there was no one inclined to bestow a twelve-years' labour on a scientific theory until M. Fabre stepped forth. So with the flowers and fruits; the originals whence the cultivated specimens have been had are rarely known for certain, and for the same reason—no one keeps the pedigrees of plants, and none will work *ab initio* for a theory. Yet such pedigrees would be eminently suggestive to the thoughtful "breaker of sorts," containing, as they would, the result of every vagary, and the course of every permanently adopted habit. But in flower cultivation as at present carried on we have rarely more than the starting-post to begin with, the course of the flower being left too much to accident. Accident has, it is true, produced marvellous effects; but theory, as a rule, evokes more pleasing results, because it never rejects an available accident, even when working towards an ideal end, but moulds it in some measure to its will.

As an illustration, let us take the flowers of the common heart's-ease (Viola tricolor), which were small, angular, varying but little in colour, though pretty; but which, after a few years' cultivation under the name of pansy, have been increased to six, seven, and even eight times their former size, have become perfectly circular, and have stolen nearly every tint of the prism, varying their arrangements almost indefinitely. Or take the dahlia before the battle of Waterloo, then a stranger to France, and but little known elsewhere in Europe, with its scanty patinate petals round a flat disk, its monotonous colour, its season of bloom

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of short range, and its tendency to run much into stalk; now round as an orange, large as a pomello, with a mass of petals set so regularly, and shaped so elegantly, that we might fancy them formed to cradle fairies, in variety of colour scarcely excelled, blowing almost at the will of the cultivator, and when well tended running but little into leaf or stalk—and all produced, by care, from two varieties, the D. variabilis and D. coccinea.

The above are examples of flowering by theory; because, long before the desired result was attained, the form, though not the colour, had been conceived and worked for. It is true it was like building a pyramid, whereat many hands labour towards one point. But here there was no designing architect who could compel submission to rule—the theory alone was felt to be a true one, and the desired end was perceived to be within the capabilities of the flower. Such examples should never be forgotten by gardeners, especially by the ambitious, who, not content with growing plants resembling their neighbours', like to have their seasons of fame, for they are the finger-posts of success.

There is Brown, who loves the fuchsia for its form, and cultivates all the valuable varieties. He is but an amateur, yet, from his constant attention to this elegant flower in all its habits, he has become to desire something beyond purple and white, white and purple, scarlet and white, white and scarlet, purple and scarlet, scarlet and purple, and the other shades. He possesses a favourite, with scarlet calyx and purple corolla. Now, if he could but change the purple petals to a pure blue (purple being half-way on the road) and stripe the sepals with white (the easiest of all colours to strike), he thinks the point of excellence would be attained. So he works in secret for some years, at first with few hopes and many fears; but eventually "Brown's Marvel" becomes the pet of the season, carries off prizes, and figures in all the best flower serials.

Jones loves greengages, and has noticed that a particular tree of his bears a fruit sometimes reddish tinged, which, though small, is superior to any other in his garden. Standing near a fine gooseberry at the time, he is led to reflect on the growth of large gooseberries within the last thirty years; he remembers, too, lately reading of peaches which are grown so large by a Chinese gardener, that they rival melons in size, and have to be sliced like them, their beauty, size, and flavour promoting them to the honour of a centre-dish at table. Then, seeing no reason why his favourite greengages should remain small, their flavour excelling the justly celebrated Drop d'Or, he too experiments on his fruit, and working only for size and flavour, by accident, as he supposes, brings forth at last a *red* greengage, anomalous in name, yet

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marvellous in size and excellent in flavour. The fruit is honoured with a new appellation, and "Jones's Ambrosine" is the favourite dish at the dessert of princes.

So of others. Robinson has his potatoes, Smith his French beans, Evans his peas, Jackson his cabbages, Wilson his asparagus. And what is the secret of all this success? Each has known how to look for what he wanted, whether in flower, fruit, root, pod, seed, leaf, or stem, and has worked to that end, encouraging growth here, repressing it there, sunning, shading, watering, manuring, selecting, and sowing at the proper time, and after the most approved manner.

Leaving, then, all these various ends towards which horticulturists work except the first, which, as florists, demands our especial consideration, we would close with a few axioms for amateurs, because they are generally confined in space, and cannot have the advantage of growing in large quantities, so as to obtain a very wide range of selection.

Great ends are rarely obtained without great labour.

Keep a "ledger of progress" concerning any "flower in transition" progressing towards a desired result, in which note down the constitution of the plant, the character of the soil, the time of sowing, and the state of the weather, continuing daily the latter with the progress of the plant through the flowering condition until seeding-time, with any deviation from rule during the period.

At the second sowing do not sow all the seed, and, whether confined to space or not, select only a few of the most healthy varieties, consisting of the most forward, the most backward, the most diverse in leafage, shape, and colour, and in strength of stem; and let these grow and blow as far apart as possible, their flowers being protected from intermingling their pollen, and in as various soils and positions as you can command.

At the third sowing use some of the old seed as well as the new varieties, and so continue to sow and eliminate until you deem your new varieties fit to show, keeping your ledger as correct as possible.

Do not breed in and in, for it often leads to want of permanence and prolificness; but interbreed from two specimens as nearly alike as possible, unless you cross for a variety.

Above all, deem no system which produces a healthy plant too artificial, for gardening itself is artificial.

For instance, besides cutting out anthers from a flower which it is desired to cross, there are other ways of affecting the future bloom, which are but little practised. Such as feeding with a liquid manure near blowing-time, repressing the growth of foliage

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LEE'S NEW WHITE SPROUTING BROCCOLI.

[FROM A PHOTOGRAPH.]

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by keeping it shaded, except at the crown, by glass of cool tints. as blue or green; maturing the seed quickly by placing a corolla of red or yellow tinsel over the natural corolla as soon as it begins to fade; delaying the fall of the petals by shielding them with glass corollas of cool tints, or intensifying the colours by using glass corollas of the tint desired, etc., etc.

NEW WHITE SPROUTING BROCCOLI.

Our illustration, taken from a photograph, shows plainly the enormous crop of white broccoli to be expected from it under good cultivation. The centre head is large and fine, and the subordinate heads, all of good size, number from thirty to fifty. It has remained true to its branching character for four years; it is perfectly hardy, and is in season through January, February, and March, a period at which it is so desirable to obtain good white broccoli. It was introduced by the Messrs. Lee, of Hammersmith.

THE CARROT (*Daucus carota*).

The carrot is of the natural order umbellifera, some species of which are poisonous, and others, like the carrot, highly nutritious. The wild carrot is well known as the weed called birds'-nest, which bears, in appearance, not the slightest resemblance to a cultivated carrot.

Carrots require a deep sandy soil, free from large stones—soils of a peaty character, and sandy loams will also produce good crops. It is almost useless to attempt growing them on stiff clays. In preparing land for the carrot crop, it is important to dig or plough deep, if the soil will allow of it. The main object is to get the land thoroughly clean, friable, and in as good tilth as a garden bed. Soot and salt, or guano and superphosphate, are manures highly congenial to the growth of the carrot; 15 or 16 quarters of soot and 3 cwt. of salt, or 5 cwt. of guano and 3 cwt. of superphosphate, per acre, will be found to produce good results.

The seeds may be sown broadcast, but they should be drilled, that the hand and horse-hoe may be freely used. The quantity of seed required for an acre of land will be eight or nine pounds of the large sorts, such as Altrincham Long Orange, James's Green Top; and the rows should not be less than twelve inches distant from each other, and the same from plant to plant when finally

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thinned out. For the smaller sorts of carrots, as Early Horn, Short Horn, and Studley, the distance may be ten inches each way, adding an extra pound of seed per acre. Previous to sowing, the seed must be well rubbed between the hands to free it from the hairs; it should then be soaked in rain or river water for twelve hours, after strain the water off, and mix the seed with four or five bushels of dry, fine wood-ashes or sand. The ground must not be too wet, neither should it be dry; for the seed is very delicate and tender when germinating, and will in all probability fail if care is not taken to have the ground in proper condition. In the midland counties the seed should be sown during the last two weeks in April, but in the northern parts of England the sowing should not be done before the beginning of May. As soon as the plants can be distinctly seen, they must be hoed to half the distance they are intended to remain. Care must be taken in doing this, as there are some weeds resembling the carrot so closely that many true plants may be cut out by mistake. About three weeks afterwards, if they progress sufficiently, they should be again hoed, and thinned out to double the distance, leaving the plants ten or twelve inches apart, according to the sort. At this period of their growth they will be much benefited by an application of one hundredweight or one hundredweight and a-half of guano per acre, sown between the rows, during showery weather, and carefully and deeply hoed in the first opportunity. Carrots will require three or four hoeings, to keep them from weeds. The crop will, in average seasons, be fit for storing in October. Sometimes they are allowed to remain in the ground and draw for use, as required; but they should, if possible, be taken from the ground as soon as they have completed their growth, as they are much injured by frost. If the roots are intended for late winter and spring use, they should have the crowns cut completely off, to prevent their growing again; they should then be put in a cellar, and laid in alternate layers with sand; the sand should be rather moist. Carrots preserved in this way will be as good for table use in the month of April, as those taken out of the ground and used in October.

The above instructions are intended only for the main crop. If carrots are required for early summer use, and to be drawn whilst young, the sowing should be made in a moderate hot-bed during January, and on a warm border in the last week of February. The sorts for these sowings should be either Early Dutch, Common Horn, Early Red Horn, or Early Frame, which will furnish a supply till the main crop is fit for storing. The drills need not be more than eight inches apart for the above sorts, and

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if thinned out to four inches, from plant to plant, it will be found sufficient: they may, however, be left a little closer in the frames. The temperature for frame culture should not exceed 73°, nor fall lower than 55°.

To obtain seed, some of the finest roots should be selected, leaving the tops entire. They should be placed in sand with their crowns outward. In February they may be planted in rows, two feet asunder, in good soil, taking care to put a little sand over and around the crowns of the plants, to prevent the slugs from attacking them. The seed generally ripens in August, and each umbel should be cut as it turns brown, otherwise much of the seed is often lost during stormy weather. Seed of more than two years' growth cannot be relied on.

JAMES LEVESQUE.

Market Gardens, St. Lawrence, Jersey.

A FEW GOOD THINGS OF 1860.

THE new pansies of 1860 exceed in first-class varieties the production of any former year. Downie and Laird's batch contained some gems, undeniable improvements on the existing varieties. The *elité* of which are—Miss Carnegie and Alexander M'Nab, splendid dark selfs; Rev. J. Dix, dark, with blue-shaded eye, smooth, and extra fine; Mrs. Downie and Saturn are first-class yellow grounds; Roland, also, is very fine; Duchess of Hamilton is a grand white-ground variety, fine, and constant; Nymph is a fair compeer, but a shy grower. Turner's Veritas, sent out by them, won't do against Maid of Bath or Cream of the Valley. Hooper's lot, as usual, are about half fine varieties; the others not worth naming. We are to him indebted for more good pansies than to any one individual existing; it is a pity he will not give us confidence *in all* he offers annually. Prince Imperial is, in my opinion, the very finest dark self we have. Maid of Bath is, indisputably, yet the best white. No yellow self can rival Cherub, and his Lord Chancellor, yellow ground, is one of the finest in its class. Dr. Tucker and Carlos are beautiful in their way, narrow belted, bright, and distinct, but bad growers. Eclipse, yellow self, is very fine. There are two varieties out for Eclipse—the darkest is the best. Both good. Annie Laurie is a fine white-ground flower, large and constant. Robertson, Paul, and Co.'s three are all fine show flowers—Peter Lyh, James Piddie, and Magenni. The latter smooth, distinct, and very fine Paton and Small's Perfection is superb, rather too closely re-

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sembling Saturn (Downie and Laird), and dangerous to be shown together. M'Farlane's C. W. R. Ramsay is a gem, beautiful, smooth, and distinct among a thousand. William Griffiths is still a match for any of them from a healthy plant, but that is only one in ten, it is such a sickly grower. Amy Robsart is a chaste white ground, of fine quality, but won't do with pot culture. Ditto, Mary Lamb. Robert Burns is grand from side shoots; like Col. Wyndham (Laing), it is worthless from centre shoots or young plants—comes coarse.

Next month I will send you notes on the new dahlias, if acceptable, and of such only cultivated by myself.

Adderley Gardens, Birmingham. R. R. O.

NOTES AND QUERIES.

[We shall feel obliged by any Correspondent or Subscriber forwarding answers to any of the following queries.]

I SHOULD like to see another article in the "Midland Florist" from the pen of Mr. Cunninghame, who favoured us with so many articles in 1857 on the auricula and polyanthus. I think he has not yet described the bloom of his improved auriculas—I mean the produce of the seed he obtained by crossing the auricula with the polyanthus. I believe he promised to describe them; and as it is four years since he crossed the two varieties, I should think nearly the whole of them have bloomed, and if not the whole of them, a portion sufficient to judge of what they are likely to be. I am sure a description of the blooming of these seedlings will be read with great pleasure by all lovers of the auricula, and particularly by me, if Mr. C. can be prevailed upon to give us this information. Please insert this in the "Midland Florist," and oblige yours—W. W.

PROPERTIES OF THE SCARLET GERANIUM.

SEVERAL of our correspondents ask us what are the properties of a good scarlet geranium. The accompanying standard was published by Mr. Glenny:—

1. The plant should be bushy, the joints short, the growth free, the surface of the foliage even, and the general character and style dwarf.

2. Pips of the flower round, not less than the size of a half-crown piece, proportion of number in truss, seven footstalks long

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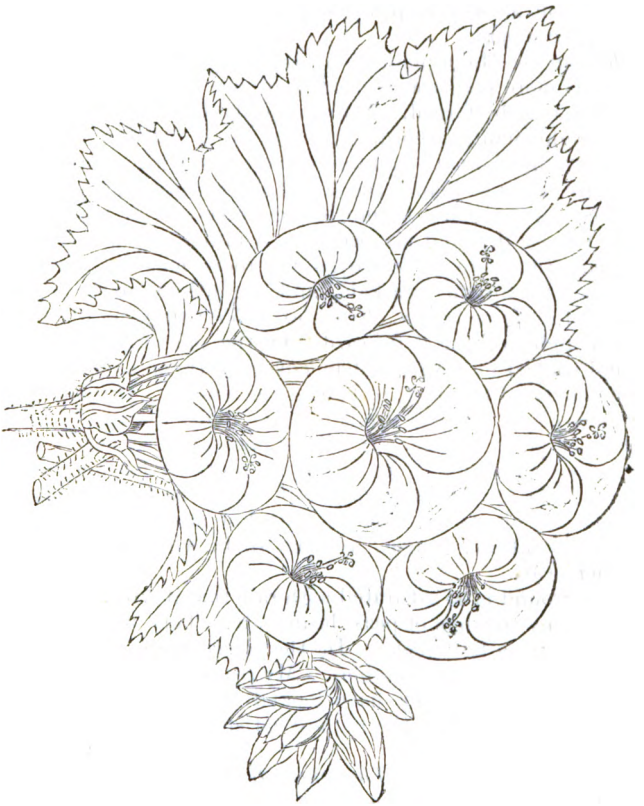
enough to spread them edge to edge, colour brilliant, petals thick, edges smooth, free from indentation or serration, and flowers well above the foliage, but no more.

3. The leaves to face outwards, bright green, or, if variegated, dark and white, or dark and yellow, well defined.



A PERFECT SCARLET GERANIUM.

THE VEGETABLE GARDEN—NOVEMBER.

Lettuces.—If not planted last month, may be done early in this. Lettuces that have stood out all the winter are not so

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tender as those that are sown on a gentle hot-bed in the month of January, and transplanted on a warm border in the early spring months. This is a good plan. When the autumn-sown plants have failed, the lettuces will come in for use quite as early, and save a great deal of trouble in looking after them through the winter.

Spring Cabbages.—Select dry weather for setting out the plants, get them in as soon as possible, that they may be rooted before the winter sets in.

Rhubarb.—Make plantations, selecting a dry day forthe purpose. If more plants are raised than are necessary for planting out, they may be forced. The young plants must be potted, from five to eight plants, according to size, in a pot ten inches over, then covering the pots containing the roots with another of the same size, so as to blanch the stalks thoroughly. They must then be placed in a vinery or mushroom-house. The stalks will be ready for use in about six weeks. Another method is, when an old plantation is to be destroyed, the roots may be covered with pots used for forcing sea-kale, and a gentle warmth applied by linings of dung or leaves. From 50° to 55° will generally be found heat enough to bring it forward. Or the old roots may be taken up and packed in a warm cellar, covering them over with leaves to the depth of two feet, to blanch the stalks. If placed near a chimney-place, where a fire is burning daily, the plants will yield a produce much earlier. It will be necessary, however, to water the roots occasionally. In taking up roots for forcing, be careful to have them up with a good ball of earth; and if the interstices between the plants are filled up with fine mould or sand, the produce will continue longer, and the roots will be fit for forcing another year.

The ground is so saturated with rain that it will not be prudent to make any sowings of peas, beans, etc. This work had better be put off for a few weeks. In the succeeding number will be given a select list of vegetables. My readers are requested not to purchase seeds till they have looked it over. The sorts there recommended will give the highest satisfaction.

JAMES LEVESQUE.

Market Gardens, St. Lawrence, Jersey.

Erratum.—On page 328, fifth line from the top, *for* "to avoid heating the soil," *read* to avoid treading the soil.

WORK TO BE DONE—NOVEMBER.

Cinerarias.—The specimen plants for early shows begin to make rapid progress; having been stopped once, have made shoots

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half an inch long; to encourage them to gain strength, and be as strong as possible, the larger leaves should be pegged down with small neat pegs, made of either fern or birch. Another batch should be selected for a succession, and treated as recommended in a previous number for early plants. The foliage must be kept dry, the roots moderately supplied with water. The past season has been favourable to the growth of these and other succulent plants. Black-fly have been few; green-fly, however, are busy, and must be got rid of. This may be done by fumigating. We find tobacco paper, when it can be obtained good, the best thing. As the plants are growing rapidly they should have as much room, light, and air as can be given with safety; by this it must be understood that no frost must be allowed to get near them. Carefully remove any fogged or withered leaves, and keep the plants as clean as possible. The first lot of plants should be nicely established in thirty-two sized pots. The second should be potted into thirty-twos at the end of the month. Never allow the plants to get thoroughly dry. The temperature should range from 40° to 45°; never less, otherwise the leaves will go curled. For large masses of bloom and good habit the following varieties deserve especial notice:—Admiral Dundas, Brilliant, Baroness Rothschild, Captain Schrieber, Duchess of Sutherland, Editor, Mrs. Hoyle, Mrs. Livingstone, Perfection, Beauty (new), Mr. Marnock (new), Master F. Watson (new), Masterpiece (new), Rifleman (new), Rough Diamond (new), Acme of Perfection (new), Lord Clyde (new), Miss Smith (new).—JOHN DOBSON, *Woodlands Nursery, Isleworth.*

Dahlias.—In all probability the frost will, ere this month is past, have spoilt the beauty of the dahlia bed. The tops should be cut off, and the tubers dug up, and placed upside down, so that all superfluous moisture may be drained; they may then be stored away dry and cool.

Fuchsias.—These will now be all in their winter quarters, and will require but little attention. Young plants struck in July may be kept gently moving. A house kept at about 50° suits them well. The following varieties make good specimen plants, either as pyramids or otherwise:—Butterfly, Chancellor, Great Eastern, Guiding Star, Hero of Wilts, Isa Craig, La Crinoline, Lord Clyde, Lord of the Isles, Lord Macaulay, Le Prophete, Leviathan, Marquis of Bath, Prince Alfred, Prince of Orange, Queen of the Sea, Sir Colin Campbell, Silver Swan, Souvenir de Chiswick, Prince Frederick William of Prussia, Fair Oriana, Fairest of the Fair.—JOHN DOBSON.

Hollyhocks.—These will in almost every case be over; the stems should be cut down. Abundance of cuttings may be

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obtained, which will strike readily in a little bottom-heat, and make good plants for next season.

Pansies.—The plants that have been selected and potted up, as recommended in a previous number, should be kept moderately dry, and have as much air as possible every favourable opportunity. If the weather is mild, leave the lights tilted all night. This will prevent the drawing. Take the lights off during the day, if the weather is dry. All the stock should be in its winter quarters; plants in beds may want a little attention. If any shoots are not secure, peg them down to prevent their being blown about with the wind. Look well after slugs, both in the beds and those in pots.—JOHN DOBSON.

Pelargoniums.—Although this is a quiet month with the planter, yet it is a very trying one, the atmosphere being generally dull, damp, and foggy, which causes the leaves to fall off. Water but seldom, and always ascertain previous to giving them any that the plants require it. Don't water at haphazard. An occasional fire and cleanliness will go far in getting the plants safely through the month. In damp weather fires should be occasionally lighted to dry up the damp, and if the temperature is favourable give air at the same time, but this can seldom be done with safety this month. Keep the house dry, and the temperature from 40° to 45°. Young plants should not be allowed to get pot-bound for the want of shifting. Pot moderately firm the surface of lately potted plants; clear them of weeds and fogged leaves, and occasionally turn them round. If growing long, stop them; they will soon break. See to the tying out and arranging the shoots of specimens or young plants if they require it. Plenty of room should be given; if overcrowded, they will draw, and will not throw up such strong flower-stems. In potting, do not overpot; this is the cause of many failures with amateurs.—JOHN DOBSON.

Tulips.—The bed should be prepared; so many directions have recently been given, that it is unnecessary here to repeat them.

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THE

MIDLAND FLORIST

AND

SUBURBAN HORTICULTURIST.

THE EDITOR'S ADDRESS.

We do not undertake the Editorial duties of the Midland Florist without a full appreciation of all the difficulties attending the office. We know much is expected from all who follow in the wake of gentlemen who have for fourteen years been able to satisfy a large class of readers, for scarcely two people have the same notion of what will please the public. It may be, that we fancy we can improve the work, while others shake their heads, and doubt it. Be that as it may, we can assure our readers, that as none of the old contributors worth notice have deserted the "Midland Florist," and as some who had become lukewarm have recommenced their papers, there will not be sufficient change to make any one uneasy, and our own articles must speak for themselves. The object of the proprietor is to make the "Midland Florist" the medium of communication for all the garden community. To this end, we at once state that our policy is that of "non intervention." All the papers and periodicals may go to loggerheads, while we hoist the neutral flag, and let them fight it out. We belong to no party, or amalgamate with no sect; our rule of conduct will be "to mind our own business," and, so far as we are concerned, we request that all we have to do with will do the same. We are not going into the hedges and highways to pick up weeds; we shall wander among the gardens to gather flowers; but if weeds come where flowers ought to grow, we must get rid of them as best we can. Our readers must, how ever, bear in mind that there is a good deal of valuable information which can only reach us through the instrumentality of others. Reports of shows in all parts of the country can only be furnished by the secretaries of societies, or such as are on the spot. Local newspapers that report shows ought to be sent to us by the society, or some member thereof, because, copied into our work, the

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matter will reach many thousands who would never hear of the exhibition by any other means. Meetings of societies are just as interesting. The discovery of any new mode of performing operations, or of anything else novel in theory or practice, is naturally welcome, because, by inserting it in our pages, thousands can be enlightened in a few hours upon subjects that otherwise would be confined to a small locality. Remembering, then, that the MIDLAND FLORIST is open to every cultivator who wishes to instruct the horticultural world, to all who have wrongs which only public opinion can palliate or redress, to those who have real complaints to make against public bodies, all who wish to be heard (or rather read) upon subjects that interest everybody will do well to write. But unfounded observations on imaginary evils will have no place. The work has been for many years distinguished for its independence and its integrity, and we must not suffer these to be tarnished in our hands; we have our work to do, and we hope our contributors will do their parts; the result must be good.

THE AURICULA IS WANTED.

WE believe, in common with almost every amateur within a reasonable distance of the metropolis, the decline of the auricula in these parts is more owing to the absence of trading florists who can supply them than anything else. We know several who have been anxious to begin growing them, but where are they to be had? When James Dickson had a first-rate stock of all the good ones, and Colley and Hill of Hammersmith supplied them, we could go in blooming time and make selections of any we took a fancy to. There was great encouragement to grow them, and large temptation to improve our stock; but when Dickson's were totally destroyed by the hailstorm, and Colley and Hill had left off business, auricula growers were at a loss. The shows were discontinued; and almost at the same time hundreds were driven from their gardens, and were for a long time without any. Groom, the only general grower of all the florists' flowers, died, and the metropolitan amateurs seemed all cast adrift without anchor or compass. We have no doubt that the merit of the flower, the very little room required, and the desire to revive old times if possible, would insure a general move in its favour if we all knew where to procure a collection of the favourite sorts; and it would be doing floriculture good service if some good-natured friend would put us all in the way of procuring a collection reasonably, because many who were driven from their gardens, to make room for builders, have gone "farther afield," but not into worse air, and have begun florists' flowers again. Tulips, carnations and pinks, picotees and ranunculuses, certainly gave place to dahlias and pansies, but many long for their old favourites, and we should be delighted to see every facility for purchasing offered. There is no want of means, nor is there any lack of disposition, to begin again in earnest. Indeed, we see nothing to prevent the formation of a society for the promotion of

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auricula culture, to hold a show and a dinner once a year, where the flowers should be, as of old, brought on the table in the rank they were placed by the judges; not as was attempted at several general exhibitions, to be made one of fifty different objects, to be gazed at or passed over by a multitude brought together by music, but shown to advantage by themselves, among those only who could appreciate their beauties, and discuss their merits, as they pass down the table and up again, and then remain to form the subject of intellectual conversation on their properties. There are such societies still in more northern latitudes, but some of the best have been well grown round London, and would now only occupy a wider circle. Some of our readers could certainly enlighten us, and we hope they will not think it time lost to set us fairly going round London, by giving us the best information—"what to buy and where to buy them," for we are sorely ignorant upon the latter subject, although we might, and perhaps shall, give our opinions of our particular favourites. Nor need our readers confine themselves to one flower—polyanthuses would be very nearly as welcome as auriculas.

FLOWERS VERSUS SHELLS—LIVING VERSUS DEAD.

Those who may be called extravagant in a garden have a great advantage over very many fanciers of other subjects, inasmuch as the gardener's principal objects increase in value, whereas the collector of coins, shells, pictures, antiquities, or any other dead matters, remain the same if they are kept a whole lifetime, and as duplicates turn up in other people's hands the value of the same thing is considerably diminished. The florist who gives ten pounds for a tulip, undoubtedly finds that the same thing may be bought two or three years afterwards at half the money; but he has the satisfaction of knowing that he has three or four instead of one, so that by selling two at half the price which others in his situation have been doing, he has his money back and still a larger stock than he bought. Carry this further: suppose a new flower is raised, and an extravagant price is wanted for it, because it is the original of a future family—say a hundred pounds—and the buyer chooses to keep it all to himself until he has a large stock, it increases in value every year, and he may almost fix his own price upon each bulb when he lets it out, for if it be good there are more growers want it than he can supply. There are among the lovers of the tulip men of all ranks and condition: say, by way of illustration, a score who will give twenty pounds for a real acquisition to their beds, there will be found fifty, perhaps, who would give ten pounds, a still greater number who would give five, and hundreds who would give a guinea. But we speak only of a really good and new variety; and the careful man who gives a hundred pounds may make, if he have patience, a large profit, and still keep up his stock. Mr. Strong, of Hammersmith, was at one time an enthusiastic collector of shells, and gave very large prices for things that were rare. On ex-

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hibiting these to a visitor, he was congratulated upon his beautiful collection. "Ah," said Mr. Strong, "but I like tulips better; these shells are not worth a third of what they cost me; *this* I gave ten guineas for, there were only so many in the country then, and now they have come down to a guinea through others having been imported; *that*, which was very rare, and I hardly knew where there was a fourth—I knew of two besides this—and there is hardly a collection now without it. Now with tulips it is exactly the reverse. If a variety is unique, or even scarce, it commands a large sum; but if I buy, mine increases as fast as other peoples; and I never gave a large price for one that did not, by its increase, bring me home again, and leave me a good stock behind. Now my shells do not increase, the stock in the country does, but every scarce one that is imported lowers the price of those already here, and mine would not cost now, if I wanted to buy them, a third of what these cost me." This was unanswerable, because the truth of it flashed across the mind of his visitor in an instant. The same thing occurs with all dead stock in which there is a chance of duplicates being discovered or produced, and any other flower or plant will do as well for illustration as the tulip. A dahlia that is a positive novelty, and good, will bring a large price, because the buyer can make as many as he pleases, and could sell all he made if the floral world could be convinced that it is new and good; but the dahlia trade in novelties has been destroyed, because new varieties not deserving of the name have been let out year after year at very high prices, and have disappointed the buyers so often, that it is almost impossible to convince the growers that an alleged novelty is good, and therefore hundreds of cultivators, who would gladly give half a guinea for a new and good variety, will not run the risk. Whether there will ever be an authority that can be universally believed we cannot tell. We are told that a society of amateurs and gentlemen's gardeners has been formed to decide upon the qualities of fruits, flowers, plants, and vegetables brought before them. This, if honestly conducted, may succeed, because, being all buyers, they are not likely to decide favourably of anything not worth their money. To revert, however, to our first subject: it matters not what flower or plant we compare with the dead stock, the one increases in value, the other stands totally still, or depreciates—they cannot become more valuable. We shall be glad at all times to see or hear of a new subject that is worthy of cultivation, because we shall feel it our duty to inspire confidence in it, when once we are confident ourselves, inasmuch as really good things are not often raised, and when a man is fortunate enough to produce one, he ought to receive the advantage arising from an extensive sale. How many fine things have produced the raiser a mere trifle, and the buyer a large profit? We could mention many, and our wish is, that the raiser should be able to submit his novelty to us, or to the society, if there be such, as we are told there is, that the character may be stamped upon the subject before he sells it, and that he may reap the advantage of its good name. We wish, too, that all gardeners, professional and amateur, would strive after novelty; they may not succeed the first nor the second year, but perse-

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verance will at length be rewarded by something that will perpetuate their names as the raisers; and when they succeed, they need not be in a hurry to part from a flower without something near its value; they must bear in mind that, unlike the shells and coins, and other dead stock, the flowers will be worth more as they increase, and bring more for all the trouble they give us, and especially if they take care that it is seen by the buyers of good things who attend public shows.

DRUSUS.

WHAT IS TO BE DONE?

SIR,—Large firms are advertising against each other. Societies are seeking rather to damage their rivals, than benefit themselves; and this nasty feeling is in turn taken up by the public, who fully participate in the pleasure, or the annoyance, that attends the success of a rival. There is no longer a feast at which these jealousies can be dropped. The only dinners to be heard of, are those which each society of exclusives occasionally provide on a show day for their leading men, and to which none but the exclusives are invited. These rather foster the envy, than abate it, and we go on from season to season, without the slightest ray of sunshine to chase away the miserable clouds that obscure the florist's hope, and darken his prospects. What is to be done? Are things to remain as they are? Is the amateur still to dread laying out half-a-guinea, lest it should be a swindle? Are gentlemen who grow flowers to avoid exhibiting, lest they should be defrauded of their prizes? Are we still to mistrust everything and everybody connected with floriculture? Are men engaged on one of the most delightful of all studies, to fear each other and continue damaging each ether, because both are obstinate and both wrong But, without answering these questions, how is a change to be effected? Whose business is it to reconcile differences? Who can pour oil upon the waters? Who can suggest a means to accomplish an end? There is only "one way to an Englishman's heart," and that is "down his throat," in other words, there must be a feast before any material change is made; and if any narrow-minded, malice-bearing, thin-skinned gentlemen should refuse to join in a *ré-union*, let it stimulate others to be more anxious. In the present state of things nobody is benefited. All who follow floriculture as a business are damaged. All who practise it for amusement lose half the enjoyment, because there are no social meetings, at which they can discuss the merits of new subjects. A good assemblage for a dinner, which, like those of old, shall commit nobody; but at which every difference of opinion shall be dropped for the day, will be a treat, and soften down asperities, remind people of old and happier times, and pave the way for a general reconciliation. Men will begin to think then, whether it was wise to do themselves an injury rather than do another a service. They will begin to consider whether it is not far more profitable to help, than to hurt each other. Whether, in fact, if

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we took as much pains to please as we do to teaze, it would not be a much better world to live in. However, what is everybody's business is nobody's. There is but one step, and that is for those who have been most conspicuously opposed to lead the way. There is no danger of people hanging back, and once the thing proposed, there is little fear of the result. A list of stewards, comprising known opponents, would insure success. Whether we shall ever see a hundred and eighty enthusiastic growers of all classes dine together again is doubtful, but there is no good reason why there should not be, and floriculture hold up its head again. As a science, it has wonderfully progressed; all flowers have greatly improved; but the public have been weaned, and there has been less profit. There is a good deal of lost ground to be fetched up, and nothing but a *ré-union* can restore the confidence of that class, which is, after all is said and done, the life and soul of floriculture—the enthusiastic amateurs. Such is the opinion of "AN OLD FLORIST."

[This paper is not new to us, but it is impossible to disapprove of the sentiment or to dispute the facts, we find it among many contributions which are too good to be thrown away.—ED.]

MR. RIVERS' DIRECTIONS FOR FORCING ROSES.

VERY few years ago forced roses were one of the luxuries of gardening, and the matter was looked upon as a difficult operation, in which accomplished gardeners only were successful; but with modern varieties the difficulty has vanished, and every one may have roses, at least in February, with the most simple means. A pit ten or twelve feet long and eight feet wide, just high enough to stand upright in, with a door at one end, and a sunken path in the centre, a raised bed on each side of the path, and an eighteen-inch Arnott's stove at the further end, opposite to the door, with a pipe leading into a small brick chimney *outside* (a chimney is indispensable), will give great abundance of forced roses from February to the end of May. To ensure this, a supply must be kept ready; so that, say twenty, may be placed in the forcing-pit about the middle of December, a like number in the middle of January, and the same about the middle of February; they must not be pruned till taken into the house, when each shoot should be cut back to two or three buds or eyes, the latter for the strong shoots. The fire should be lighted at seven in the morning, and suffered to burn out about the same hour in the evening, unless in frosty weather, when it must be kept burning till late at night, so as to exclude the frost; and for this purpose double mats should be placed on the lights. The thermometer should not, by *fire heat*, be higher in the day than seventy degrees during December, January, and February; at night it may sink to thirty-five degrees without injury. The temporary rise in a sunny day is of no consequence, but *no air must be admitted at such times, or the plants will exhaust themselves and immediately shed their leaves.* When the sun begins to have

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power, and in sunny weather towards the end of February, the plants may be syringed every morning about ten o'clock, with tepid water, and smoked at night on the least appearance of the apis or green-fly. To ensure a fine and full crop of flowers, the plants should be established one year in pots, and plunged in tan or sawdust in an open exposed place, so that their shoots are well ripened; the pots must be often removed, or what is better, place the pots on slates to prevent their shoots striking into the ground; but with Hybrid and Damask Perpetual, even if only potted in November previous, a very good crop of flowers may often be obtained, and a second crop better than the first; for the great advantage of forcing perpetual roses is, that after blooming in the greenhouse or drawing-room, their young shoots may be cut down to within two or three buds of their base, and the plants placed again in the forcing-house, and a second crop of flowers obtained. The same mode may be followed also with the Bourbon, China, and Tea-scented Roses; with the latter, indeed, a third crop may be often obtained. Towards the end of March, when the second crop of flowers is coming on, the plants may be gradually inured to the air, by opening the sashes in mild weather. This will make them hardy and robust. Syringing should be practised every morning and evening; but when the flower buds are ready to open this must be confined to the stems of the plants and the pots, otherwise the flowers will be injured by the moisture; air must at first only be given about twelve in the day; care must be taken to remove the plants from the forcing-house to the green-house or drawing-room before their blossoms expand; they may then be kept in beauty many days. I have not found the check which the plants receive by this sudden change of temperature at all detrimental. During their second growth the plants should be watered once a week with manured water,* and the surface of the pot occasionally stirred. Those that are forced with the greatest facility are worked roses; these seldom or never fail to give an abundant crop of flowers; stems from six to eighteen inches and two feet are equally eligible; the latter form elegant plants, and I think generally grow with greater luxuriance than dwarfs. China and Tea-scented Roses on their own roots are more delicate, and require more care; still one crop of flowers may always be depended upon, even from them. Instead of forcing them for a second crop it will be better to place them in a green-house; they will then bloom again finely in May. I find, from experience, that all the autumnal roses may be forced every year without any disadvantage: to ensure their well doing, they must be removed from the forcing-house early in June, the surface of the pots dressed with rotten manure, and plunged in the same, or leaves, or any light substance. Towards the end of September they should be carefully shifted, removing nearly all the earth from their roots, into a compost of light loam and rotten dung, equal quantities (this is, on the whole, the very best compost for potted roses), watered and again plunged till required for forcing; this shift-

* Two pounds of guano to ten gallons of water forms the very best species of liquid manure; this should be stirred before it is used.

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ing would be better performed in June, but, as the weather is often then hot and dry, roses worked on the dog rose are apt to suffer. Pots of the sizes called near London twenty-fours and sixteens* are the best sizes for strong plants of roses for forcing; when potted, the large and unyielding roots should be cut off close, so that the plants may stand in the centre of the pots, the fibrous and small roots merely tipped. The treatment recommended for roses in a pit with Arnott's stove may be pursued with roses in a house with smoke flues or hot water pipes. Arnott's stove is recommended as an economical and eligible mode of heating, practised here to some extent with success for several years: on these stoves an iron pan, fitted to the top, should always be kept full of water. Roses may be forced slowly, but with perhaps greater certainty, by the uninitiated, by giving air freely and constantly in mild weather during the day, keeping the fire constantly burning during the same period as recommended when keeping them closely shut up.

THE CULTIVATION OF PINKS IN POTS.

THE most disagreeable of the difficulties attending the culture of the pink, is the necessity of stooping many hours to properly attend merely a small collection. Hundreds who would think nothing of the trouble if they could stand to it are obliged to decline it, because they cannot stoop. This naturally suggests their culture in pots, or the raising of the bed; the one is practicable everywhere, the other is difficult and unsightly—we have tried the experiment upon a small scale, and notwithstanding all the supposed disadvantages, we have found it succeed so well as to astonish some of the old growers. The treatment may be assimilated to that of carnations, as nearly as possible: the compost should be rich light loam, and well decomposed cow-dung or leaf mould; 24-sized pots are sufficiently large for blooming, and the convenience of their removal to a bench table for disbudding. Tying, laying the petals, &c., renders it one of the most interesting of all the fancy flowers, to those who really glory in a fine pink.

The principal care is required in the drainage of the pot being good—the water carefully administered—the flowers kept from the burning sun—and plunging the pots in ashes, old tan, or some other medium, all the while the plants are making growth; when the pipings have struck, they may be pricked out as usual in store beds; as soon as they have attained sufficient growth, they may be potted in 60-sized pots, and plunged for the winter. Hooping and matting them is a very good plan to keep off very heavy rains and snow, and to lessen the effect of the very hard frosts. As soon as the roughest of the winter is over, they may be potted for bloom, without breaking the ball, and

* The respective sizes of these pots are 24's, 7½ inches deep, and 8 inches over, measuring across the top of the pot; 16's, 8½ inches deep, 9 inches in diameter.

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re-plunged in ashes, care being taken that the bottom is hard and well drained, and hoops as before, to use mats for shelter in the event of heavy rain, hail, &c.; with this treatment the pink may be very beautifully grown and flowered, and among the modes of encouraging a general emulation in the cultivation of the pink, nothing would do more than the awarding of prizes for pinks in pots—not the best twelve or the best six, but for the best single plants, allowing every grower to put up whatever number he likes to exhibit, and from the general mass let the judges select for prizes half-a-dozen or more of the best, which may be afterwards first, second, third, &c., or have equal awards as the judges may think proper, or the style of cultivation may justify. There is no artificial dressing, fairly applied to the cut flower, which may not with equal propriety and facility, be applied to the bloom on a plant; and these will be a great security against the disgraceful practice of borrowing, begging, or stealing cut flowers for show, and also against the equally discreditable tricks of podding or manufacturing blooms. When the time comes for disbudding, tying, &c., the cultivator can take his seat at a bench or table, and have the pots up one by one, and get rid completely of the fatiguing and troublesome job of stooping for hours at a bed of pinks, which, however well-disposed or enthusiastic many persons may be, is more than they can accomplish. As the fine weather advances, and the sun becomes powerful, the pots are easily removed to shady situations—there is the same facility for the ordinary single shades where it is desirable to use them. There is an opportunity of regulating their bloom by placing the backward plants in warmer, and the forward ones in cooler situations; there is also an opportunity of showing the growth, which is as important and as interesting to the cultivator as the bloom itself. Upon the whole, we believe that growing of pinks in pots for prizes will open a new field for the exertion of the pink amateur, and give a fresh impetus to a fancy which has declined greatly, as much from the disagreeable necessity of stooping over a bed, as from any other cause we can imagine, though the nasty tricks of some exhibitors, whom this new plan will effectually discourage, have had some share in the withdrawal of many respectable florists from the collection and cultivation of the flower. The management of the pipings and general rules of cultivation are the same as in beds, and many who water with manure-water, in preference to any other, while the flowers are opening in the buds, will find it have much the same effect in pots.

A GOOD MOVE IN THE RIGHT DIRECTION.

Among those measures which we hope to see adopted by Horticulturists, the most important and most useful would be periodical meetings of all the amateurs and gentlemen's gardeners in each and every locality. If they subscribe nothing, and do nothing, but talk to each other, they cannot but improve while they limit the conversation as much as possible to gardening. In all great towns and the principal suburbs,

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there ought to be a particular night and place, for all who feel interested in Horticultural pursuits, to meet, we care not if there be but half-a-dozen, or half of that; if they would but meet, each would have his bit of chat, and tell his bit of news, and if one person in each locality would inform us of the place and time of meeting, we would publish every one of them, that a person travelling might know where to meet his brother gardeners in any town, city, or suburb in the whole kingdom; we hope this project will be carried out in all parts of the country, for we can see the advantage there would be in their communicating with us, and our having the means of conveying any thing to them. Suppose there were fifty meetings in fifty different, places, something that affects the interests of gardening at one, that one might communicate it to us, and we in a few hours if pressing, might send it to every branch, and when the "Midland Florist" comes out, tell the whole of our five thousand readers. These meetings might prove of the greatest benefit to all classes of cultivators, from the wealthy amateur to the garden labourer, and nothing more easily carried into effect. We recollect a great meeting being held at Nottingham, and a society arose out of it, but we do not know if it be in existence, if not, it ought to be revived. A LEICESTER FLORIST.

GARDENERS AND THEIR EMPLOYERS.

THE interests of the employer cannot be promoted without the benefit becoming reciprocal; and the interest of the gardener cannot be permanently improved without the master participating in the advantage. We have, it is true, protested against a low rate of wages. This at the first blush, would appear a sort of attack upon the pockets of the master, but a moment's consideration will place the matter in a very different light. The gardener has to work with the head as well as the hands. He is, or should be, master of a science constantly advancing, a science in which he improves daily, if he has the opportunity and the motive to attempt it. Now, we maintain that a man who has sufficient to live upon and keep his family, in his humble sphere—for humble enough it is in all cases—may pursue his business and improve his practice every week of his life. But he who has to encounter privation, whose mind is not at ease, who finds at home claims which he is not able to answer, cannot apply equally well to his business, and he is not of the same value. He follows his occupation as a duty, which he fills only so far as he is obliged; which he attends only the hours necessary for ensuring his pay; which he commences without pleasure, and leaves without reluctance. It is to render men worth more, that we would give them more; for we maintain that the master will have more work done in proportion to the money he pays, if his gardeners have liberal wages, than he will receive from men placed on the footing of labourers. It would be well if those who endeavour most illiberally to set the labourers' limit on the wages of gardeners in public establishments, were doomed to

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live upon the scanty allowance a few months; and the more these people were inclined to improve themselves, the more they would feel the privation of books, of papers, and of the means of improvement. By the time they had been kept on twelve shillings per week a couple of months, they would appreciate the value of an additional sixpence per day, and we should no longer have the stamp of inferiority to bricklayers' labourers, to dustmen, to the lowest dregs of the populace. placed upon the profession of a gardener. They would begin to think how unjust it is for a public establishment, to which all classes look for example, to make that example permanently injurious to a large and valuable class, who have a right to their rank in the scientific world, and whose only degradation is inflicted by the heads of their own profession. It may be argued that a vast majority of those employed in a garden are labourers; so much the worse; the employment of labourers as gardeners is one of the worst evils that gardeners have to encounter; it is an attack on a gardener's only property—his profession; a profession which has cost him many sacrifices, and sometimes considerable money; it is taking from the profession the only return they can ever look for – employment—and throwing it to people who never knew a trade, never sought a profession, never sacrificed anything to their training, and who, in a moral sense, have no right to it. But a tenfold injury to masters and gardeners arises out of this. The system of employing labourers is full of mischief; first, it introduces a careless, slovenly mode of gardening; for men who do not learn their profession by means of proper instruction under good teachers, never acquire proficiency, and seldom become tolerable in a garden of any pretention to neatness. Secondly, it confounds in a few years the labourer with the gardener, and lowers the character of the profession altogether. Thirdly, it leads to low pay and great distress among the very masters of the business. Fourthly, it doubles and trebles the number of people seeking employment in a garden, and every labourer employed throws a gardener out of bread. Lastly, a man has to pay ten persons to do the work that seven or eight proper gardeners would do infinitely better. We cannot conclude without congratulating those gentlemen who have already acted upon the plan of employing none but gardeners, and of adding the sixpence per day, which we have so often recommended. It is not less pleasing to ourselves to find that in every instance the total weekly wages have not been more, while the work has been done much better, and the hands employed have been more creditable to those establishments.

Fulham, S.W. GEO. GLENNY.

A FRIENDLY HINT.

SIR,—I am, among many of my friends, of opinion that the "Midland Florist" has shown a weakness in the admission of articles on the cultivation of common vegetables, and I hope that among the

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changes to which we may all look for the better, we may calculate on a more complete devotion to flowers; the only recognised departure being the admission of an old ally the gooseberry. I shall be the first to welcome you if this one improvement is made. The impression on my mind was, that some of our floral friends had deserted us, and that vegetables were admitted for want of better company. Another improvement I might suggest, but perhaps I am anticipated, I allude to the monthly operations; by the admirable articles on Garden work for every month in the year, published in our almanack, which to my mind are not surpassed by any of the monthly calendars I have seen, it is perhaps intended to confine the operations of the work itself to a few judicious hints on the Florists' Flowers, which command more attention at the time, and not to fill up our space with "kitchen stuff," from the published hybrid "*vade mecums*" and "price currents" of tradesmen's catalogues. There is a one-sided, narrow view taken in those sources of information, and I take it, the "Midland Florist" has established a reputation, which should not be tampered with by copying from works established to promote particular tradesmen; I would myself, rather see the book come out short of a few pages, than see them filled up with articles already printed in the "Chronicle," the "Florist," the "Cottage Gardener," or any other of those which are for the most part filled with papers mainly re-written on subjects, better handled years before, by original thinkers as well as writers. Surely there may be found among your contributors willing pens enough to help you out with subjects founded on our own practice, to prevent the necessity of copying; not but I must admit there are treatises in print, thirty years old that I should willingly see transferred honestly to the "Midland Florist," because they have not been superseded nor improved upon by pretended authors, who have presented garbled imitations without a new idea, and, which is worse, neither the point nor perspicuity of the original. I enclose my card.

FELTON.

KEW GARDENS IN 1840 AND 1860.

(From "The Garden Forget-me-not," by Mr. Glenny.)

IN the year 1837, our attention was called to the dilapidated state of Kew Gardens, and, being at the head of the only garden newspaper, we felt it our duty to call the authorities to account. We denounced the plants and place as a disgrace to the country, and reported in detail the dirt and vermin that infested the plants, their bad health, the want of proper labels, the ruinous state of the houses; and, having given the gardener a fair dressing, we said the country had a right to have it placed on a proper footing, or done away with. Of course, we had a hornet's nest about our ears. To dare to brave the authorities was a most presumptuous act, and all the trumpery papers that were in the habit of basking in the sunshine of government patronage, attacked us right and left; they might as well have

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attacked Dover Castle. We reiterated our charges, and goaded the authorities into the appointment of three commissioners. We were summoned before a Treasury Committee, and offered one of the appointments; but we respectfully declined, saying, that as we had given our report, and stated what we thought necessary, we were not the proper person to appoint. They suggested that Dr. Lindley should be one. and we suggested Mr. Paxton (now Sir Joseph) and Mr. Wilson, who were appointed accordingly, and, after very careful examination, confirmed all we had stated, and suggested the very measures that we had advocated. Nor did we rest our pen until every thing was done as we had desired, and even more. Yet Dr. Hooker, in his "Guide to Kew," conceals all these facts, he most unfairly says:

"Throughout the country an opinion *existed* which soon *began to be loudly expressed*, that either the gardens should be abolished, or placed upon a very different footing, and rendered available, as a great scientific establishment, for the advantage of the public."

Why not have honestly stated who roused public opinion,* and who insisted upon the gardens being entirely abolished or made worthy of the nation! He tells us that the Lords of Her Majesty's Treasury appointed a committee to inquire, and that the result was, that in May 1840, a return was made to the House of Commons in the shape of "a Report from Dr. Lindley, who, at the desire of the Committee, had surveyed the gardens, in conjunction with two well-known practical gardeners." Not a word about the present Sir Joseph Paxton

* What paper but the "Gardeners' Gazette" expressed an opinion loudly.

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and Mr. Wilson being the well-known parties. And then again, the two well known practical gardeners, who, in fact, were by far the most important workers, are burked in another sentence: "Many useful suggestions were offered *by Dr. Lindley* in the before-mentioned document," &c.; so that what we really begun, and two first-rate practical men, suggested by us, carried out, is placed to the credit of Dr. Lindley alone, who had nothing to do with it, till we, in common with himself, were invited "to inquire," &c. The real fact was, that the report was the joint work of Sir Joseph Paxton and Mr. Wilson, well-known practical gardeners, who alone found the judgment, and Dr. Lindley, who was not a practical gardener, which report we published at the time, because it confirmed everything we had written, and recommended everything we had suggested; and to that report does the public owe the conversion of Kew Gardens from a filthy dilapidated place, crowded with sickly lice-eaten plants, to its present high condition.

FLORA IN THE COTTAGE.

SIR,—The cottagers of East Stratford, Essex, have formed a Society for the Exhibition of Flowers and Vegetables. They hold their first show (Chrysanthemums) on the 26th and 27th instant, at the "Golden Horse" Tavern, Forest Lane. As the principles of the Society are of a novel character, a short account of what they *intend* to do may be acceptable to you, who have always taken a lively interest in the garden of the cottager and the allotment system.

We have been informed (the rules are not yet printed) that any cottager may become a member by paying a small entrance fee; that each member shall pay a small weekly contribution, not, however, to form a prize fund, for we believe that no money prize will be given, nevertheless, for a very laudable purpose, as each member will receive the full value of his contributions in seeds, or plants to stock his garden.

Should a member, through sickness, be unable to keep up his weekly payments, a small levy will be made upon the members to keep the sick member, in compliance with the rules of the Society. Gentlemen's gardeners, on becoming members, will be exempt from the weekly contributions, at the same time they will receive no benefit from the funds of the Society. They will exhibit only in the Gardeners' Class, and not be allowed to compete with the cottagers. It has likewise been suggested that the members, in rotation (or those amongst them who have sufficient ability to do so), shall give a short lecture, or read a paper, at their weekly meetings, on the culture and properties of some flower or vegetable, thus establishing a sort of Floricultural Mutual Improvement Society. All this, of course, may be modified; but we have every reason to believe that the above will form the groundwork of their laws. And it is our opinion if the members elect intelligent officers, with a cool and experienced pilot at the helm, something good may result from their labours.

D. STRATFORD.

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DO FLOWERS AND PLANTS DEGENERATE? NO!

SIR,—I have very strong reasons for believing that nothing degenerates with proper management; I know many growers assert the contrary. They say, "look at the ranunculus;" very well, I have had all the Scotch seedlings where they were popular, and they were not so fine the second year as the first, and considerably worse the third than the second. To those who look at effects without seeking for causes, this may seem pretty conclusive, but here there are two causes; first—the air of Bethnal Green was very inferior to that of the North; and secondly—(and this is a most certain cause of degeneration), they were grown in the same place three years consecutively. Now what would be said of a farmer, who cropped the same piece of ground three years with potatoes? Now, it happens that florists—I make no distinction between amateurs and professionals—continually breed "in and in" as it is called; they grow things in the same soil, propagate in the same place, and grow the offspring in the same garden. How then can it be expected they should be able to keep up the quality of anything in their own garden; but those who buy flowers and plants of dealing florists, find them as good as ever, because they are grown in a fresh place, with different soil and air, and the florist himself cannot show such blooms as his customers. The generality of this evil is partly owing to the necessity of keeping things to themselves. Suppose a florist raises a new variety of, no matter what, he naturally endeavours to propagate it, until he has stock enough to let out, he does not like to trust anybody else with it, because when a bit of it is once out of his hands, he cannot answer for who may get it by fair or foul means, it would be difficult to say how many hundreds of fine novelties have been lost by the raisers, in their endeavours to keep them from other people. Old florists and amateurs must remember to have seen many a fine seedling that was never heard of or seen again. The fact is, that the same soil and air does not agree with things raised there, and liberal raisers will rather risk the loss of a plant or two, by letting a friend grow a portion, than trust to his own soil and situation entirely for saving it; hence it is that when the seedling plant is sold to another, it is very rarely lost. I have known a dahlia grower to propagate largely for sale, but to buy in, or exchange the whole collection for his own growth. This, however, does not apply to long-lived plants and trees, it is their nature to stand long in a place without a change of any kind; it only applies to plants constantly renewed. Perennials on the same spot degenerate, and therefore are annually renewed by loppings, layers, or cutting: the old stool will bloom worse every year, unless it be an indigenous plant in its wild state, these cannot degenerate. Those which by culture, crossing, and high breeding, like the pink, piccotee, carnation, hollyhock, and other subjects that have been produced double, and brought right away from their single nature, and pansies which have been greatly increased in size can, and will go back to much smaller sizes, unless annually arrested by propagation, and I have never heard of any deterioration of a variety that I could at once trace the cause; so that after years of observation I cannot help disbelieving altogether, that any plant, tree, fruit, or flower degenerates unless improperly treated. INVESTIGATOR.

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FLOWER LISTS.

A List of 12 best Fuschias out, and 8 of the best to come out in the Spring of 1861. The New varieties are marked *

Count Cavour (Banks) tube and sepals red, corolla lilac, large and showy. Elegantissina, (Smith's) tube and sepals scarlet, corolla very large and fine. Eclat, (Smith's) tube and sepals crimson, corolla white, large and fine. Fascination, (Smith's) tube crimson scarlet, corolla white, large, full and fine. *Figaro, (Smith's) tube and sepals bright red, corolla bright purple, striped with lake, fine. Fairest of the Fair, (Banks) tube and sepals blush, corolla violet rose, fine. Great Eastern, (Smith's) tube and sepals crimson, corolla dark purple, very large, good habit. Guiding Star, (Banks) tube and sepals white, corolla violet, small, but very attractive. Lord Macaulay, (Banks) tube and sepals bright crimson, corolla violet, large and fine. *Lord Elcho, (Banks) crimson tube and sepals, violet purple carolla, very fine. *Pioneer, (Smith's) very large double tube and sepals, crimson corolla, light purple, extra large and fine shape. Prince Frederick William of Prussia, (Banks) tube and sepals bright carmine, corolla plum colour, fine. *Prince Leopold, (Banks) tube and sepals red, violet corolla. *King of Purples, (Smith's) tube and sepals scarlet crimson, corolla violet, extra large, very stout. *Mammoth, (Smith's) this is a double of most extraordinary size, very bright violet, free and fine extra. *Minnie, (Banks) stout white tube and sepals, corolla scarlet, extra fine. Senator, (Smith's) tube bright waxy crimson, corolla rich violet, extra fine. Solferino, (Smith's) tube and sepals very bright, corolla rich purple, extra large and fine. Sir Robert Peel, (Banks) fine formed tube and sepals, fine purple amaranth corolla, extra. Schiller, tube and sepals white, corolla very showy, rich plum.

A List of 12 Best Verbenas out, and 8 of the best to be sent out in the Spring of 1861. The New ones marked *

*Cato, blush with deep pink eye, large and fine. *Cruor, brilliant crimson scarlet, light eye, fine form, the best of its class. *Chancellor, bright crimson purple, with yellow eye, a fine variety for all purposes. *Calypso, rich rosy crimson, very large, of fine form, extra. *Black Prince, bright rich crimson, purple eye, white shaded round with a ring of maroon, extra fine. *Fairest of the Fair, pure white with bright purple eye, good habit, the finest light verbena raised. *Nemesis, rosy scarlet, of fine substance and form, extra. Pink Perfection, bright lively pink, rosy scarlet eye, the finest of its class. Dr. Sankey, rosy puce, lemon eye, fine. General Simpson, crimson scarlet, large and fine. Geant des Batailles, deep crimson, dark eye, large and fine. Madame Jondeir, Lavender and dark rose, with rose stripe, fine. Monsieur Hardy, deep scarlet, with shaded eye, large and fine. Mars, bright crimson scarlet, fine for bedding. Mrs. Moore, deep

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blue, white eye, good form. Prima Donna, rosy pink, very large and fine form. Lord Raglan, scarlet, lemon eye, fine form, constant and fine for all purposes. Rosemande, deep rose, purple eye, fine. Sihata Perfecta, white and lavender, distinctly striped, extra fine. Souvenier de l'exposition, white, large pink centre, very pretty.

GEORGE SMITH, Hornsey Road, Islington.

BOYD'S DOUBLE PATENT SILENT BRUSH LAWN MOWER.

A FRESH patent has now been secured by Mr. Boyd for his *silent* motion lawn mower, which is obtained by an unerring and simple method, and which improves the general working of the machine and effects a considerable saving of labour. Another important improvement under Mr. Boyd's new patent is, that the grass box in front of the cutters is abolished, and the grass as it is cut is carried to the back of the machine and falls into a sack, which can be removed when full, and replaced by another empty one. It will, therefore, be seen that the gardener can accomplish more work by this method in a given time, than over the old method of having to stop every few moments to empty his grass box.

Boyd's Patent Brush Lawn Mowers have now stood the test of public opinion for three years, several thousands have been sold, and they are universally allowed to be the best extant. It is the only machine that will cut wet grass without clogging the knives, and that has the the self-cleaning and sharpening apparatus.

The Times in referring to it says:—"For our part we infinitely prefer Boyd's Patent Lawn Mower—gliding silently along and doing the day's work of five or six men in a single hour."

The *Gardeners' Gazette* for Oct., 1860, thus remarks:—"Mr. Boyd, whose Patent Brush Lawn Mower is now so well known all over the world has succeeded in effecting by means of his Silent Lawn Mower, a saving of labour of at least 60 per cent. over other machines. This will be the machine of future seasons, and will be unsurpassed and unapproached by any other makers, whose machines have not the advantages which Mr. Boyd's Silent Brush Lawn Mower alone possesses."

Boyd's Double Patent Silent Brush Lawn Mower can be had of any Florist, Nurseryman, Seedsman, and Ironmonger in the Kingdom, and of the sole Licensed Maker, B. Samuelson, Banbury. Forwarded free to any railway station in the Kingdom.

A FEW GOOD AAZLEA INDICAS.—Bouquet de Flore, Admiration, Bealii, Beauty of Europe, Beauty of Reigate, Broughtonii, Coronata, Criterion, Crispiflora, Empress Eugenia, Eulalia Van Geert, Extranea, Gem, Iveryana, Magnificent, Perryana, Duke of Devonshire, Petuniflora, Prince Albert, Queen Victoria, Rosea Punctata, Rosy Circle, Symmetry, Triumphans, Variegata Superba.—*Garden Almanack.*

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WOOLLEN RAGS AND SHODDY AS A FERTILIZER.

THE most complete way of using woollen rags, is to have them torn into the smallest possible shreds, but the waste of the cloth dressers (the dust it may be called), that is shorn and combed off the article after it is woven, and by the manufacturers called Shoddy, must be better than the smallest rags. With regard to its fertilizing qualities, there can be no question; by analysis Shoddy contains ten per cent. of ammonia, the most powerful of all fertilizers; we are told that nitrogen is the grain perfecting and flesh forming agent, and further, that while guano contains only 182lbs. 10ozs. of nitrogen in a ton, Shoddy contains 270lbs.; farm yard dung contains only 11lbs.; night soil 39lbs. 8ozs.; soot only 4llb. I mention these very familiar dressings, to show that Shoddy must be a valuable manure. And now for a little practical experience about the matter. I cannot as yet go into particulars as to quantities, but judging from guano of which 2½ cwt. is a dressing for an acre, and guano at a rough estimate contains 10 per cent. of ammonia, I give something like the same proportion of Shoddy, in which I planted the various kinds of bedding stuff, and at the same time I planted another plot of the ordinary garden soil. The difference in the growth was remarkable. The flowers, or rat her th plants, grew twice the ordinary size, so that the character of the beds was destroyed; the ramping growth of the geraniums made the Tom Thumbs into giants, and the beauty and symmetry was upset, while those planted on the natural ground were as usual. I think, therefore, that Shoddy will answer better for farm crops than for flowers, except such as want extraordinary growth. I was rather sorry that I had not given more room, and downright vexed to find that they growed so fast and bloomed so late, that the frost cut them off, just as the flowers might have redeemed them. The flowers appeared to be coming freely enough, but come they did not, for the plants caught the frost worse than those in ordinary ground without extra dressing. I must try it again in less quantities and for different subjects. Perhaps the same beds may do better when once more turned over, but I merely mention my little trial, to show that Shoddy is a powerful agent, and that when we know exactly how to use it, we may find great benefit from its adoption. I am growing some bulbs with it; and I anticipate its usefulness in pinks, carnations, dahlias, and other flowers which we want to grow large. It matters very little what size these plants attain, because it is the individual blooms that we all care most about. I regretted I had not tried asters in the bed, because I can imagine they would reach a great size.

I am, Sir, your constant reader,

T. P., MANCHESTER.

HINTS FOR THE NEW EDITOR.

SIR,—As an old Nottingham florist, who has watched "The Midland" through all its stages, I cannot help expressing a hope that it has passed into good hands, for it cannot be denied that the work has had many trials, and has maintained its position in despite

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of much ill-usage. At one period a man thought the work could not do without him, wanted the pay of a good writer, and threatened to withdraw if it were not given him, many of us feared that the Proprietors would give way, and if they had, very few subscribers in this part would have continued the work; but fortunately it was resolved otherwise, and although the rejected man's friends discontinued their patronage, the work never had so fine a prospect of taking the lead. But the Proprietor was like the old man in the fable, he listened to the complaints of interested and disappointed people, he read and pondered over anonymous letters, he tried to please everybody and pleased nobody, he first placed himself in one man's hands, and then in another, and wanted consistency and firmness. The work was produced by many pens, but there wanted a master mind to direct. Perhaps one of the greatest mistakes ever made, was the admission of a most abusive and unprovoked attack by Mr. Walker upon one who least of all deserved such treatment, for that called forth a defence that Mr. Walker will remember as long as he lives. But this kind of matter does not suit the quiet amateur or the commercial florist, and, sir, knowing as I do, the meddling propensity of some insinuating but very worthless characters, the restless temper of others, and in addition to all this, the jarring elements all through the floral community, I merely desire to put you on your guard. Pay no attention to threats, to promises, to anonymous letters, for you will have plenty, admit no article that attacks a brother florist, for you will have abundance, make such a selection of the numerous articles you receive as your judgment leads you to approve, and treat all meddlers with contempt. If you allow no attacks, there can be no defence called for, but never forget that the work should be *floricultural*, and that the pages ought not to be polluted with articles on the growth of vegetables. They have been so well handled in books of high character, that whatever can be hashed up now is by comparison very contemptible, and in the "Midland Florist" sadly out of place.—A. NOTTINGHAM AMATEUR.

THE ROSES HAVE BEEN SENT OUT.

MARIE PORTENSE and Triomple de Rennes on briars, and Genera Jacqueminof, Caroline de Sausal, La Ville de St. Denis, Comte de Nanleeul, Jules Margottin, Madame Knorr, Duchesse d Orleans, on the stock of Signor Manette, have arrived safely at the Beehive, Fourposts, and have been more than duly acknowledged as follows:—

REV. SIR,—I beg leave to return you my best thanks for your kind present of the rose-trees, which I have received quite safe, and I hope they may thrive in my little garden. I have taken the liberty to offer for your acceptance the accompanying curiosities taken from the house of "Nana Sahib," at Cawnpore, and the other little article (a very ancient coin) was given to me, as having dropped from

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the hand of a mummy. Hoping that you will not be offended at my offering them, and again thanking you, I remain, yours very obediently, G. E. (formerly an officer's servant in India).

My sister and her husband have a house on either side of S., and I hope, some day, when I visit them, to present myself to G. E. in the "white blanket, coat, and blue silk neckcloth."

Rushton Rectory. W. F. RADCLIFFE.

P.S.—Since my last account of new roses, another novelty has bloomed, Madame Charles Crapelet. Her petal is of good substance, and her colour, scarlety crimson, is good.

WHY NEGLECT THE TULIP?

WHY should the care which attends the culture of the dahlia make a florist apathetic about the tulip? We say the tulip more particularly, because the very ground it occupies is cleared in time to plant out the dahlia. There is no period of work connected with the tulip that should interfere with the business of the dahlia; and the former has an advantage almost equal to the latter, in the small share of skill required in its culture, and the requisite attention being easily supplied by common laboring men. The fears as to the cutting of a tulip bloom have been dispelled; the only disadvantage attending the exhibition of a tulip is, their absence from the bed, that is, when we cut them from the bed. However, there are few who have not a second or store bed. Under these circumstances it is to be regretted that there is not more enthusiasm among the growers, and that the introduction of other subjects should at all divert the attention from this splendid flower. The tulip is one of those magnificent beauties whose varieties and properties do not detract from their botanical interests. Its single form only is valued: whereas the rose, dahlia, pink, and carnation, are rendered florists' flowers by taking them out of their botanical character; nor is the tulip by any means at its best; noble as are many varieties, the flower is clearly in its infancy, and no subject at this moment offers so much encouragement to the florist to seek after new varieties. Under all circumstances, we cannot but wish to see all the cultivators of tulips go in earnest at seedlings, and enter with spirit into competition at public shows. In fact, we look upon the laxity among tulip growers rather as an evidence of idleness than otherwise, and nothing can be worse as an example.

THE DEODAR, OR INDIAN CEDAR.

(Cedrus Dedora, London.*)*

THE Deodar Cedar was first introduced into England by the Hon. W. Leslie Melville, in the year 1822, and first produced its cones in 1858, in the pinetum at Bicton, the residence of the Baroness Rolle, in

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Devonshire, where some of the largest and finest specimens in Europe are to be found at the present time, and young plants, raised from seeds, ripened in England.

Dr. Roxburgh, who first named the tree *Pinus Deodara*, says, "Devadura," or "Deodar," is the name the tree is known by among the natives where it grows, but more recent researches gives numerous other local names besides Dr. Roxburgh's Hindostanee ones.* It is called "Kelon," "Kolan," and "Kolain," in the Gurhwal dialect, all sanscrit variations for cedar, and its resinous extracts. In Kundwur it is known as the "Kelmung," by the Arian population, and about Simla, as the "Keloo," "Kelon," and "Keaslee," all vernacular terms for resin, or its extracts, which, after its timber, is the most valuable product of the tree. Its turpentine is called "Kelouketel," by the people around Simla (from "Kil," to throw or cast out resin; also to be white, alluding to its colour), and obtained from small split pieces of the wood, prepared for the purpose with smothered heat, the produce having the odour of the wood, but not the consistency of tar. In Kafiristan the tree is called "Nokhtur," on account of its prickly or pungent leaves; and the people of Nepaul, Cashmere, and Persia, apply the same terms as those used by the Hill people, and hold it in equal veneration.

The Deodar Cedar is found on all the higher mountains, from Nepaul Proper up to Cashmere, and towards Kafiristan, at elevations varying from 5000 to 12,000 feet.

The tree is evergreen, and has a very striking appearance, on account of its glaucous colour. It flowers in September, and the seeds are ripe in October or November of the following year. The cones are erect, solitary, and produced on the upper side of the stout top branches, and when ripe, break up, and fall to pieces, shedding both scales and seeds on the ground.—GEO. GORDON.

CHRYSANTHEMUMS

SIR,—For some years past I have contributed my mite of information to the amatuer subscribers of the "Florist," on the culture of the chrysanthemum. As all the exhibitions are now over, also those in open borders, for this year, if the few practical hints I have been able to collect round the metropolis are worth your notice, you are truly welcome to them, or any portion you may think proper to extract. I have always admired your cheap and valuable little work, as one of the best of its kind out. There has been 14 exhibitions held round the suburbs of the metropolis last month, but none of them so good as last year. Majority of the pot plants were superior as far as cultivation goes, but very inferior in bloom; where a thousand blooms on some of the pompones were expected, only twenty were to be seen,

* The Hindostanee names, "Devadura," "Deodar," and "Deewur," and of which the Gorkhalees and other native tribes sometimes abridge the orthodox sanscrit to "Deyer," and "Dewer," is derived from "Deva," or "Derva" (Deity), and "Daru" (timber, or tree), and "Tree," and rendered by sanscrit writers as "Lree of God," "Spirit Bearer," "Divine "Lord of Gedars."

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the remainder only shewing buds. This is attributed to the absence of sun and dry weather in the summer, and the cold north and easterly winds in October and the early part of November. Although many of the plants were housed early in October, and a gentle heat with plenty of air was liberally supplied, it was of little use; as it is evident if the plants do not bloom freely in the open borders, all the artificial appliances under glass fails to produce, what nature out of doors is deficient in. The only remedy to meet such another unfavorable season, is to grow more of the early varieties which are sure to bloom. As for example, among the pompones, I would recommend Argentine, Solfature, Madame Roussilon, Sacramenta, Dr. Bois Duval. Cedo Nulli, Golden Cedo Nulli, Autumna; against Bob, Durufflet, Hélène, Canrobert, Saint Thaias, Miss Julia, Salamon, &c. For large varieties Vesta, Mount Etna, Princess Marie, Annie Salter, Cassandria, Compte de Rantzcan, Alfred Salter, Christine, Hermoine; against Plutus, or Yellow Perfection, Voltaire, Dr. Maclean, Prince Albert, Defiance, Pilot, Progue, Phidias, &c. There are several new varieties both early and late that will no doubt be a great improvement on the old ones, but as they have not been proved yet, I shall not enumerate them, but leave it to you to give a description as you may think best, as no doubt you have seen Mr. Salter's new collection let out this year, and also those for next. It will occupy too much of your space to give you a review of the leading flowers at shows, as most of them were shown as the Crystal Palace; therefore I will just state briefly what were the leading plants and blooms. The best 24 cut blooms were Dupont de l'Eure, Novelty, Plutus, Princess Marie, Vesta, Yellow Formosum, Saco Varo, Marshal Duroe, Themis, Nonpareil, Stelcaris Globosa, Cassandra, Lucedum, Alarm, Fabius, Miss Kate, Queen of England, Madame Andre, Anaxo, Madame Lebois, Duke, Arignea, Alfred Salter, Mrs. H. Holborn. Among the large Anemone flowers were Gluck, Fleur de Marie, Margurette of Norway, George Sands, Margurette de Anjou, Nancy de Sermint, King of Anemones, and Madame Gooderau. The best pot plants of large varieties were Vesta, Annie Salter, Prince Albert, Dr. Maclean, Voltaire, Golden Christina, Chevalier Durvasse, Arigena, Defiance, Mount Etna, and Madame Comerson. The most attractive among the Pompones were Salamon, Dr. Bois Duval, Miss Julia, General Canrobert, Cedo Nulli, Golden Cedo Nulli, Durufflet, Hélène, Adonis, Saint Thaias, Requique, Andromeda.

There were some fine specimens of well grown pyramids which attracted a good deal of notice, from their mechanical style of training. They were Golden Cedo Nulli, Durufflet, Canroberf, Hélène, and Cedo Nulli. A few standards were shown, three feet high, flat on the top, but not well bloomed. At West Ham, in Essex, six standards were shown by Mr. Witbred, the best I ever saw, well bloomed, and formed the most attractive notice in the show; had they been at the Palace, they would have had the first prize.

The border varieties in the amateur gardens round London have not bloomed well at all this season, especially those that were planted late in the season. They were full of fine foliage down to the ground,

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but no bloom; early planting in the spring will be more likely to produce early blooming. As the bottom of the stem gets ripe sooner, it throws more vigour to the flower buds; this I have proved in my borders this year, namely, those planted in April bloomed well, those in June and July scarcely any. I trust we shall not have another season like the past; should we, however, I would recommend amateurs to plant them in April and May, in a compost of half yellow loam, and half rotten dung, giving very little water till August, then a slight top dressing of any rotten manure to cover the fibres that may be on the surface of the ground.

When I had secured the flower buds, I gave a slight sprinkling of half soot and half guano, like you would sprinkle lime to kill the slugs, so that when rain falls, or you water, it works in, and excites the bloom bud; this I did three times in three weeks, and found it answered admirably well; other manures will answer as well, only not so easy to apply, such as sheep, horse, or cow dung, but used as a liquid, instead of sowing on the top.—SAMUEL BROOME.

Temple Gardens, December 18th, 1860.

MUSHROOM CULTURE.

THE easy manner in which this delicacy can be produced induces me to forward you a few hints for those who may not yet have attempted its culture, and who I would strongly recommend to give it a trial, particularly those who, as many do, possess the advantage of an outhouse or cellar with a temperature of from 48 to 55 degrees, and a little short dung; this (if fresh the better) thrown in a heap to heat and dispel the greater part of the moisture it contains for a few days, and then thrown down again for a day or two to dry and cool down, after which thrown up again for a few days, say five or six, will by that time be fit to make a bed with, which should be sixteen inches deep, and any size required. In making the bed, care should be taken to tread or beat it firm. As soon as the heat shall have risen and declined to 75 degrees, it is ready to spawn. I find Cutbush's milltrack the best spawn I can procure; this broken in pieces the size of small apples and placed just in the dung covered two inches deep with any garden soil will produce mushrooms of first-rate quality in six or seven weeks in a temperature of 50 to 55 degrees; the soil should be beat firm when put on, which completes the whole of the operations needed. A bed thus treated 10 feet by 7 inches, spawned with half a bushel of the above-named spawn obtained of Messrs. Cutbush, of Highgate, has produced me more than 80lbs. weight of excellent mushrooms, many weighing 4 oz. each. The bed has been in bearing since the 7th October, and will, I anticipate, produce at least 40 lbs. more, with no more trouble than an occasional watering.

W. YOUNG,
Gardener to R. Barclay, Esq.,
West Hill House, Highgate

Dec. 17th, 1860.

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THE AURICULA.

Mr. Editor,—'Tis well known to yourself that a few years since exhibitions of these beautiful flowers were somewhat abundant in London and the neighbourhood, but of late they have been much on the wane; in fact, 'tis a rarity to hear of such a thing taking place; and if allowed to encroach so much on your valuable space, will call to your mind that the Crown and Anchor Tavern, Strand; Gray's-inn Coffee House, Holborn; Cannonbury-house, Islington; Five Bells, Chelsea; Greyhound, Dulwich; Elephant and Castle, Newington Butts; Hanover Rooms, West; Jamaica Tavern, Bermondsey, and some other establishments had their exhibitions year after year, and year after year have we been gratified with the view of most splendid specimens of this pleasing flower (the productions of amateurs), in competition for prizes most spiritedly contested by a number of our much-respected and esteemed friends, and, if not out of place, will mention a few of the most staunch supporters, for "reminiscences of the past often give rise to pleasing discussions," of the above exhibitions, viz.: Messrs. Bray, Bagley, Briant, Chapman, Cork, Goldham, Jeffreys, Glenny, Prest, Strong, Welljee, and many other gentlemen well remembered by all florists of the time; many we regret to say have passed away to their last homes.

Although these delicate and admirable flowers have been so much oversighted by London amateurs, our friends in Scotland have been cultivating them on a somewhat large scale in full pursuit of improvements, and, if report can be relied on (in which I have full confidence), they have been most successful. and are able to introduce new varieties in all the classes that outvie our old favourites. This is pleasing news to the admirers of this flower. Another gratification is, that the dealers' stocks are becoming thinned in consequence of the great demand, a consolation that cultivators are on the increase, and that we may soon expect exhibitions to follow: we wish to see it realized, for never have we spent happier days (in our floricultural pursuits), than at the private shows of the Auricula, and earnestly do we wish a repetition of those pleasures.

An Old Florist.

A HINT FROM THE EDITOR.

The "Midland Florist's Almanack," published at 6d., is a most appropriate introduction to the new volumes, should be procured by any means by every reader, because it contains the most complete directions for work in the garden every month in the year, and therefore relieves us of the constant repetitions which must appear if we go on with the calendarial directions from month to month. A reference to the almanack will enable us to confine our hints to those particular operations that belong to a few florists' flowers. We have not been able to see the propriety of wasting the pages of a florists' work upon the cultivation of market garden stuff; such things do to

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fill up with where there is a scarcity of other matter; but we are sorry if we have displeased any reader by excluding from the "Midland Florist" all long second-hand papers on the culture of vegetables, for be it known "the culture of vegetables" has appeared in old and new books and papers until the subject has been copied to death. In the garden operations of the Almanack enough has been done to give all the information needed, but the culture of flowers is an inexhaustible theme; every cultivator has some new crochet. The variety of flowers is numberless, and many even of the same family require different treatment, so there is always something to be learned if florists are communicative. But it is not so with cabbages, cauliflowers, peas, and vegetables generally. The Monthly Calendar, even that of old Abercrombie, teaches the vegetable grower all he ought to know, and the hundred and one calendars taken from it can do no more. Having therefore explained to the florist that the work is his own, we have only to add that, unless it be something quite out of the common way, we want only floricultural articles or papers on the general interests and prospects of gardeners' remarks, shows, reports of shows (of florists' flowers), and subjects connected with that peculiar branch of gardening with which florists, both professional and amateur, take delight. The work has progressed under many disadvantages. Let us hope that as every pains will be taken to remove them, and to enlist as many new writers as possible, it may make a new start and distance all its contemporaries.

AN OLD AND NEGLECTED FAVOURITE.

THE sunflower has been neglected some years, because the dahlia, which bloomed about the same time, and lasted longer in perfection, offered greater variety, and certainly filled up a most important period in the flora of the garden. But there is something noble in our neglected favourite, and particularly as it has become double, and when the flower declines, the usefulness of the sunflower only commences, while the dahlia is good for nothing. The seeds of the sunflower are excellent food for poultry, and there is a good deal of it. They are full of oil, which may be easily compressed, and the cake is food for cattle, for any thing in fact that will eat it. No doubt poultry will devour it, even when the punished portions of oil has been removed, although they doubtless prefer it whole. The plant of the sunflower is full of fibre, and could be manufactured into card or paper, and the refuse is good for manure. But taking ordinary gardens, ordinary people, with about as much poultry as most folk in the country keep, the sunflower ought not to be forgotten. A score plants will yield a good deal of seed, and they would save a good deal of barley. It has been said, but we know not with what truth, that the seeds of the sunflower, given to poultry in excess, imparts a disagreeable flavour to the fowls and their eggs; we have not discovered this, but if it be true, it should not be given in excess. We know that where fowls are kept on the coast, and sprats and herrings are

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occasionally used in quantities to manure the land, there has been said to be a fishy taste in the eggs; this may be, because the birds have fed on the fish for many days together, but it only lasts for a short time, and there is a peculiarity in the taste of the sunflower seeds which, if the fowls had no other food, might be imparted to the flesh and eggs, but we have not discovered it ourselves. The sunflower is easily cultivated, the seeds may be sown in the open ground, on a sunny bed or border, the middle of April, and where the young plants have formed leaves, they may be taken up, with all their roots, and planted where they are to bloom. They grow from four to six feet high, want no support, and if in fully well dressed ground, the flowers will be six, eight, or ten inches across; when they begin to decay, pull out all the dying petals, and the whole face of the bloom is full of seeds which will turn black, and if not watched, will fall out and waste, but if they begin to get loose, cut the head off. There will be side flowers in abundance, all of which will yield seed, but not in so great a quantity. The heads may be hung up to dry over a box, or something that will catch the seeds if they fall, and when perfectly dry, the whole may be rubbed out. By sowing in a hot bed in March, we may get the plants strong, and potted singly till May, when they may be planted where they are to remain. The fibre is seldom used we believe in England, but the plants when done with oftener go to the rubbish heap. In India they are said to express 10lbs. of oil from 80lbs. of seed, and the cake is valuable for feeding horses, cattle, sheep, pigs, rabbits, and poultry, particularly if separated, and mixed with any kind of meal. The oil is valuable to cloth workers, burns brilliantly in lamps, and is useful to printers. The fibre is worked into packthread and cordage of all kinds, works well into paper, and evidently its value as a crop is hardly half known. But it has in some parts of the world been cultivated on a large scale, dibbled in the same as beet root or beans, and at a very light estimate of its produce, made to appear a tempting crop to the English farmer; yet, instead of reckoning half a pint of seed to a plant, a quart would be nearer, if raised in heat, and planted out in May, for we have known five or six heads of flower to ripen their seeds on one plant; the principal head will have the grains closely packed over a circle of nine or ten inches. It is also useful as a plant for bees, and should always be grown where there are hives. In short, some should be grown in every place where pigs, poultry, and horses are kept, if not for an old favourite garden ornament, for its various uses when it has ripened its seed.

CULTIVATION OF TULIPS.

Short directions for growing tulips have already been given, but those were for beginners who had no opportunity of entering at once into the more expensive modes of cultivation. The tulip, however, is a flower so hardy, that a severe frost will scarcely affect it in the eyes of ordinary observers; yet the bloom is so extremely delicate,

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and capable of being produced in such high perfection, that judges of their qualities would frequently reject a flower in which the general run of florists would hardly see a fault. The tulip should be grown without excitement of any kind, and without a check. Its progress should be even from the time it appears above ground till its bloom is perfect; and this essay is rather intended for those who intend to grow them for exhibition, than the mere lovers of the flower for its appearance, as the former set their whole hearts and minds upon achieving perfection, while the latter are content with growing them well enough to please the mass. There are, however, many who have not yet grown tulips, and who would, as far as it is practicable, start at once at the highest objects. These will require directions which everybody can understand, and which will render the undertaking simple to those who have no knowledge of the subject. We will, therefore, suppose a friend who has never had a tulip to be at our elbows, and that we have to give him the necessary information to enable him to grow it in perfection at once.

First—provide yourself with a necessary quantity of blooming bulbs—that is, the bulbs which are large enough and healthy enough to bloom the first season. Suppose the bed you require is to be 25 ft. long—quite long enough for a private first-rate collection—this collection of bulbs ought to contain an equal quantity of roses, byblomens, and bizards, the three distinctions which are acknowledged among show tulips, and which we have already described, the roses as having white grounds with pink, rose colour, or crimson marks; the bizards having yellow ground, with any coloured marks; and the byblomens having white grounds, with purple, lilac, or black marks. A bed properly arranged consists of seven long rows, of which the tallest should be the middle, and shorter ones nearer the side.

Tulips are, on account of their different heights, called first row, second row, third row, or fourth row flowers, the first row being nearest the sides, and the fourth row being in the middle, of course both sides being alike. There are but four heights recognised. Although we have said a bed should consist of seven rows, to make the matter plain to those who have not grown a bed of tulips, every seven which goes across the bed is called a row; and among tulip growers, whenever they speak of a row, they mean the row of seven which crosses the bed, all these sevens being numbered from 1 to 50, as distinct rows, or up to the full number, whatever it may be. Tulips should always be planted six inches apart every way; consequently, a bed of twenty-five feet would take fifty rows of seven each, or, which is the same thing, seven rows of fifty each. If a beginner would rather buy them already arranged for his bed, he will receive them in shallow drawers or boxes full of partitions, of 2 inches to 2½ inches square, seven of them in a row, and as many rows in each drawer as the fancy of the maker or of the person who ordered them dictated. If you get them made yourself, the best size is 2 inches deep, 18 inches wide, and 26 inches long, divided into seventy partitions, or ten rows of seven each, and five such drawers will complete

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the bed of fifty rows; each of the rows should be numbered, as the means of constant reference, and the front of the first numbered 1 to 10, the second drawer going up to 20, the third to 30, the fourth to 40, and the fifth to 50.

Each of these partitions will hold a bulb, and a few off-sets if it have any. These drawers should slide into a sort of moveable cupboard, with panels of wire at the back, front, and sides, like the panels in a safe or pantry door, that it may let in all the air, and keep out mice and other vermin. The ledges on which the drawers slide should allow of half an inch vacancy between the top of one drawer and the bottom of another, and a hole should be bored with a common gimblet through the bottom of each partition to complete a ventilation. These directions are necessary, if you have to get drawers of your own; but if you buy a bed of tulips already arranged, you will most likely have drawers sent with them, and the bulbs already arranged in their proper places. As, however, we are not to depend on that, we have to provide for it. The tulips required will be 50 fourth-row flowers, 100 third row (there being two rows alike of the other heights), 100 second row, and 100 first, and each of these ought to comprise as nearly as may be one-third of each class. There should be a few over of each to guard against accident. The parties who supply the tulips should not only send the names attached to each, but their classes also; for instance, say Claudiana, 4th row; Rose, Siam, 4th row; Byblomen, or Duke of Clarence, 4th row; Bizard, and so on throughout. Suppose, then, we commence arranging the bed, having our drawers placed end to end in one length, from 1 to 50, ready to receive the bulbs, and the bulbs properly classed by our side; we take the fifty middle or fourth-row bulbs, and beginning at the first short row marked on the drawers No. 1, we put a rose in the fourth or middle hole or partition, a byblomen in the middle of next row, a bizard in the middle of the third row, then over again, rose, byblomen, and bizard, throughout the fifty middle or fourth rows; then take the 100 third-row bulbs; begin at the No. 1 end; but as the fourth or middle row was begun with a rose, begin the third and fifth, or next rows to it, with bizards; the side rows on each side the middle, having to be arranged at the same time, put roses to the second short rows, byblomens to the third short rows, and so on,—bizard, roses, and byblomens, on each side the middle row throughout. Then take the 100 second-row bulbs; begin with byblomens on each side, that is, second and sixth rows, then bizards, then roses, and so on byblomens, bizards, and roses, to the end of the fifty rows. Lastly, come to the first or outside rows; these are to be the same as the middle row, that is, beginning with roses and going on with byblomens and bizards, always the same as the middle or fourth row is. To make this plain, and leave no room for misunderstanding, we must suppose a cross to represent a bizard, a star to represent a rose, and a cypher to represent a byblomen, and the following would be the result of the arrangement just described in a bed of fifty short rows:—

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	1	2	3	4	5	6	7	
1	✱	o	†	✱	†	o	✱	1
2	o	†	✱	o	✱	†	o	2
3	†	✱	o	†	o	✱	†	3
4	✱	o	†	✱	†	o	✱	4
5	o	†	✱	o	✱	†	o	5
6	†	✱	o	†	o	✱	†	6
7	✱	o	†	✱	†	o	✱	7
8	o	†	✱	o	✱	†	o	8

The effect of a bed thus planted is very grand: the crosses represent yellow-ground tulips; the stars represent white grounds, with pink, rose colour, or crimson marks; and the circles represent tulips with white grounds, and purple, lilac, or black marks. The mixture is perfectly surprising. But there is an arrangement which even beats this for effect, though it is very difficult to obtain,—that is, to have the flowers on each side the middle row grown in duplicate, not merely a bizard on the right and a bizard on the left, but the same variety on both sides. Let us make this clear by naming a few rows of flowers:

	1	2	3	4	5	6	7	
1	• Ponceau tres blanc.	o Reine de Sheba.	+ Polyphemus	• Clandiana.	† Polyphemus	o Reine de Sheba.	• Ponceau tres blanc.	1
2	o David.	+ Strong's King.	• Compte de Virgines.	o Siam.	• Comte de Virgines.	† Strong's King.	o David.	2
3	† Globe Bizard.	• Madame Vestris.	o Violet Quarto.	† Duke of Clarence.	o Violet Quarto.	• Madame Vestris.	† Globe Bizard.	3
4	• Ceres belle forme.	o Rubens.	+ Charbonier.	• Rose Imperial.	† Charbonier.	o Rubens.	• Ceres belle forme.	4
5	o Beinfaite.	† Carlo Dolci.	• Triumph Royal.	o Louis XVI.	• Triumph Royal.	† Carlo Dolci.	o Beinfaite.	5
6	+ Albion.	• Camure.	o Ambassador	† Duke of York.	o Ambassador	• Camure.	+ Albion.	6

Standing at one end of a bed, thus arranged, and seeing the whole finely bloomed, it is so superior to a bed on any other plan, that an indifferent person would instantly recognise the advantage of the uniformity. It is very true that a cultivator is lucky to obtain one of many valuable kinds, but he should nevertheless observe this duplicate arrangement in all the flowers he can command two of, and when he comes to the sorts of which he has not duplicates, he should match them as well as he can. Many persons arrange their roses, byblomens, and bizards, by beginning at the corner at the upper end, or No. 1 row, with a rose and planting rose, byblomen, bizard; rose, byblomen, bizard; rose, byblomen, bizard, right through all the rows, which represented by the three distinctions before used, would stand thus:

1	†	✱	o	†	✱	o	†
2	✱	o	†	✱	o	†	✱
3	o	†	✱	o	†	✱	o
4	†	✱	o	†	✱	o	†
5	✱	o	†	✱	o	†	✱

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When this arrangement is proceeded with, all the classes form sloping lines from side to side, whereas, under the former proposed arrangements, they form a sort of herring-bone pattern, sloping or branching from centre to side all the way along the bed; the former, to our taste, is decidedly the better for effect. Presuming you have laid all the bulbs with their names in the partitions of your drawers, to complete the fifty rows of seven each, you next get an ordinary memorandum book, and enter the names as they come, giving room against each name to make observations on the bloom when it appears, or remarks on the growth, health, &c., of each plant, if they do not bloom. To show this plainer, we will suppose the few rows we have named to be the beginning of your bed, say the first six rows of it, the entry in the book would be thus:—

NO.	ROW 1.
1	Ponceau tres blanc.
2	Reine de Sheba.
3	Polyphemus.
4	Claudiana.
5	Polyphemus.
6	Reine de Sheba.
7	Ponceau tres blanc.

NO.	ROW 2.
1	David,
2	Strong's King.
3	Compte de Virgines.
4	Siam.
5	Compte de Virgines.
6	Strong's King.
7	David.

NO.	ROW 3.
1	Globe Bizard.
2	Madame Vestris.
3	Violet Quarto.
4	Duke of Clarence.
5	Violet Quarto.
6	Madame Vestris.
7	Globe Bizard.

NO.	ROW 4.
1	Ceres belle forme.
2	Rubens.
3	Charbonier.
4	Rose Imperial.
5	Charbonier.
6	Rubens.
7	Ceres belle forme.

NO.	ROW 5.
1	Beinfaite.
2	Carlo Dolci.
3	Triumph Royal.
4	Louis XVI.
5	Triumph Royal.
6	Carlo Dolci.
7	Beinfaite.

NO.	ROW 6.
1	Albion.
2	Camure.
3	Ambassador.
4	Duke of York.
5	Ambassador.
6	Camure.
7	Albion.

and so on through the whole fifty rows. Generally the best way is to enter them on the left page of the book only; and on the right-hand side, in the same lines, make your observations. As you undo the papers in which the bulbs are first enclosed, place them in the partitions under the bulbs, which you leave open, and ready to take out at planting time.—E.

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THE BULB GARDEN.

We have seriously thought of cultivating a portion of our garden for bulbs only, because among them we recognise the harbinger of spring, the main strength of April, May, June, and July, the beauties of autumn, and the cheering blossoms of winter. In fact, some of them are always flowering; some defy the inclemency of frost and peep at us through the snow; nor is this all: for, once plant your bulbs, and you may leave them two or three seasons in the ground without any other care than weeding and occasionally stirring the surface. The bulbous tribe propagate themselves, and if you choose to take them up when their leaves turn yellow after blooming, you find a considerable increase; therefore you may begin your borders with rather scanty planting; the second year you will find them thicker; and the third, at the most, you should take them up and sort them; the full grown ones you may plant again for bloom, and the smaller ones may be planted in a bed, or a row, to grow larger, before you calculate on their flowering, although you may find many of them bloom the first time. Upon the whole, then, we strongly recommend bulbs to ensure flowers nearly all the year, and no one will deny their claims to very prominent places in the best regulated gardens. The following, with their months of blooming, are worthy of attention.

January.—Scilla bifolia (various), præcox, sibirica, and verna: winter aconites.

February.—Crocuses of many sorts; scilla bifolia, præcox, siberica, and verna; snowdrops; winter aconites.

March.—Early tulips, single and double; early campernel; jonquilles; crocuses of many sorts; Persian irises; cyclamen; coum; scilla italica, japonica, nutans, and patula; snowdrops,

April.—Early tulips, single and double; parrot tulips, large double jonquilles; sweet scented ditto; crown imperials, various; dens canis, various; fritillarias, various; grape hyacinths; hyacinths, various; oxalis, various; scilla amœna.

May.—Parrot tulips; late tulips; polyanthus narcissus, and others of many kinds; irises, English and Spanish; gladiolus byzantinus; hyacinths, various; hyacinthus amethistinus.

June.—Iris tuberosus; gladiolus atro-roseus, Colvillii and Herberti; lachenalia tricolor; white lilies; lilliam longiflorum; ornithogalum pyramidale; scilla peruvianum.

July.—Irises; pavonia and susiana; amaryllis formosissima; longifolia-alba; ditto rosea; lilium chalcedonicum and tigrinum; pancratium maritimum.

August.—Gladiolus cardinalis; feu brilliant, floribundus, gendavensis, insignis, Ma'amselle Rachel, nivalis, psittacinus, Queen Victoria, ramosus and rosa rundi; anomatheca cruenta; ferraria conchiflora and tigridia; lilium lancifolium (various).

September.—Saffron crocuses; gladiolus emicans and formosissimus; amaryllis atamasco and belladona; cyclamen europeum; amaryllis lutea.

October.—Saffron crocuses; amaryllis lutea; crocus nudiflorus and serotinus; Guernsey lilies.

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NOVEMBER and DECEMBER will owe any flowers they produce to the protracted flowering of last month's subjects, or the premature flowers of those generally flowering in the early part of the year; and if the season be mild, many of these sports of nature will appear.

NOTICES TO READERS AND CORRESPONDENTS.

We do not want great names, we want plain common sense. Teach us as much as you please, argue and reason on behalf of Floriculture as long as you please, but we want no beginnings of controversies that must be stopped at last. When we see an "Old Contributor's" paper, we shall tell him if it suits, but we shall not hesitate to reject it at once, if it be calculated to bring up old grievances, or call up angry retaliation,

A METROPOLITAN correspondent is respectfully informed that the most clumsily written paper by a practical man, is more acceptable than a well written treatise founded on books already published; compilers can be had by the dozen.

K., we do not even want the NAME in our miscellany, our contributors must at least be friends of fair showing, and so far as we can learn by reading the back numbers, we must admit none others.

APPELLANT.—Let the two societies fight it out; we decline entertaining the case, or lending ourselves to either party. It is a pity so innocent a pursuit should be subject to such outbreaks.

EQUIRER'S questions have been sent to all the other papers as well as ours. He has a little curiosity to see what sort of answers they will all find. We shall not gratify him, and we hope the others will be of the same mind.

TULIPA.—The shortest time we ever knew a seedling to bloom was the fourth season, and then only half-a-dozen out of two hundred; the fifth, sixth, and seventh year bring out the bulk. An American paper tells the readers that "Tulips bloom the second year from seed," but American discoveries are often *very* extraordinary.

JUDGES. J. P.—There are few who are distant, disinterested, and qualified also. Some names are well established, but the safest way is to put down a few qualified persons, and let the local members who show, scratch for those they like best, or write the names on paper and deposit them by way of ballot. But never let the distant showers have a voice. Nurserymen are not always disinterested, sometimes they serve exhibitors with plants, and as they know them again, they serve the same exhibitors with prizes.

A CORRESPONDENT is anxious to know of the writer who signed B, (pages 166, and 321). where he can get the American Blackberry, and the price.

WE have received several papers on subjects mentioned in the Almanack; we have inserted two or three of them; and every reader ought to possess the Almanack, which is published uniformly with the "Midland Florist."

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THE CULTIVATION OF TULIPS.

(Continued from page 30.)

After all that has been tried for the growth of tulips, no soil is so thoroughly congenial as the top spit of a rich meadow, with the turf rotted in it, but it should be chopped about, and turned over often, to see there are neither grubs, wire worms, nor any other underground vermin left in it; and whatever labour it may cost to get rid of them, it is essential to the success of your object. Now select a spot in the driest and most open part of your ground; for though there can be no objection to the bed being sheltered from the north and east winds, it is better to suffer these than to get near the dripping of trees, or the reflection of heat from a wall. Mark a space twenty-five feet long and four feet broad, and laying as near as may be convenient north and south; dig this clean out to the depth of three feet. If the soil at the bottom is sour or wet, make a drain from the bottom to the nearest place at which the water can escape; this drain should be made by cutting a trench even with the bottom of the bed all the way to the proposed outlet, half filling it with large stones, broken pots, or (for want of harder and more lasting substances), with faggot wood, and fill up the trench with the soil of the garden. If the bottom of the tulip bed should be gravel, there will require no artificial drainage. On the bottom of the bed spread a foot of the common soil of the garden; the real depth of the bed required for the tulips is but two feet; but in clearing away all that might prove obnoxious, and making the ground sound and sweet, by throwing in a foot of good garden soil, an excellent bottom is made, which will not again have to be disturbed. If the bottom be wet or sour, and you have drained it as before desired, let there be a good six inches of brick rubbish, or broken flower pots, or both, put at the bottom, and about six inches of the common garden soil upon them. The pit for the bed being now prepared for filling, spread cow dung, six inches thick, at the bottom, let it be trodden down and thrown into the intended soil for the tulips, that is the maiden loam already described as the top spit of a meadow with the turf rolled in; fill up the bed to eight inches above the surface, drive down at each corner of the bed a stake to mark the exact size the bed should be, that is, the two end stakes four feet from each other, and from one end to the other twenty-five feet, and let these stakes stand exactly square, one foot above the surface of the path, and perfectly level. If you design to have the sides boarded, which saves much trouble, your best way is to let the carpenter adjust the boards very nicely as to level, to let them go down at least six inches below the surface of the garden or path, and stand eight inches above it; he must then provide a three-inch width to fit on and take off at pleasure, because it is of the greatest service in planting. The most simple way of planning this is with bolts; the boarding should be an inch thick, staples should be placed in the fixed and in the moveable board, opposite each other, at proper distances. The use of this we shall show hereafter, but many prefer no boards, and after chopping the sides into a sort of sloping bank in the spring, turf it with

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the cleanest turf they can get. We have many objections to it, but one is too important to be passed over lightly, the chances, if not the certainty, that the new turf contains grubs or wire worms, or some other pest, that will soon find their way to the bulbs, and perhaps destroy the best in the bed. There are others who have temporary boards altogether, and just before the blooming time chop the sides of their beds square, and place the boards round, merely hooking them together at the corners, and driving stakes down at proper distances to keep them in their places. The fixed boards properly laid down with stakes are far better, as they confine the earth more effectually, and keep the beds true as to form, and the three inches of removable board is of great advantage in the planting. In either case, whether there are boards or not, the earth is to be filled up to eight inches above the path or surface, and all rain be kept off until planting time. It will soon settle down to six inches. The tulips may be planted any dry day in October or November. Rake the surface smooth and level; the stakes at the corners are to be attended to in measuring; from the centre between the two stakes, stretch a line down the middle of the bed, and pat it very gently with the back of the spade to make a mark; then stretch the line six inches off on one side, and do the like again six inches on the other side, and so make your seven marks six inches apart very distinct. But if you have boards properly fixed, they should be notched every six inches all round, which saves all measuring; you then level the bed one inch or so below the edge, the line is stretched from one end to the other, from notch to notch, and the seven rows being marked, without any trouble of measuring, you take a straight stick that will reach inside the boards from one side to the other, and having one person on one side of the bed and one on the other, they adjust the stick to the notches in the board, and by pressing it into the soil a little, they completely mark across the long lines, showing the exact places where the bulbs are to be placed. If there are no boards, the parties must each measure six inches every time they move the stick. Now take your first box, and one row at a time is to be removed from the partitions to the same places on the bed, they are merely pressed into the soft earth enough to make them stand upright with their points upwards, emptying the boxes a row at a time, from No. 1 to No. 50; the whole are planted in an incredibly short time, and the boxes put away for the winter. If two are engaged, plant the first, second, third, and middle yourself, and hand the other the fifth, sixth, and seventh, one at a time, and see that he places them right. The next operation is to put four inches of soil on the top, by sifting it gently over the bulbs, or a good cone or heap of soil may be put over each by hand, to keep them in their places, and the remainder may be laid on with the spade, but the former is safest and best. The stakes will enable the operator to adjust the four inches by stretching a line from stake to stake, the proper height, before he throws any soil on the bulbs. But now observe the convenience of moveable boards. In the first place the soil is levelled to the edge. without drawing a line or measuring, because the edge itself is the guide, and in the next place, as soon as the bulbs are all planted, the

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moveable boarding is put on, and the soil sifted on the surface all over till it is more than full, when the superfluous soil may be raked off; the nearest bulbs to the edge being six inches off; the earth may be raked close to the boarding at the edges, and a gentle rise, so as to leave the bed rather rounding, will bury the points of the side tulips three inches and those of the centre four. The bed for ordinary shows and moderate growth might have all the weather now till the tulips come up; but for our purpose, that is, growing as near perfection as is attainable, the whole should be covered from heavy falls both of rain or snow, and from the moment they are in the ground have none but general showers, and not much rain of any sort. We should never see the bed dry, but should be quite as unwilling to see it too wet. The time for planting tulips should be before they send out their green spears, or swell their fibres at the bottom of the root, and not one moment should be lost after either of these warnings, for every hour afterwards the strength is going, and the bloom in danger. The path round the bed, the stage, covering, and other matters, shall be treated of in good time; for the present we have done.—E.

THE BALSAM.

Very few persons cultivate this plant with good taste, and too many go to work as if the only object were size. Hence we find, that in exhibitions where these plants figure they are very large, the flowers distant, great part of the stem naked, and the only recommendation belonging to them is the great size of their individual flowers, and the monstrous appearance of the plants themselves. But the proper way to grow a plant is to have nothing coarse about it, and to keep it in strong condition with good proportion of leaf, stem, and flowers, and let it grow its own way. The properties for a good balsam are, as laid down by Glenny many years ago.

First, branches down to the surface of the pot, no bare stem, flowers close together, and foliage among and beyond them. The flowers completely circling the stem on all sides.

Second, the individual flowers large, round, and double.

Third, the petals thick and smooth on the edges.

Fourth, the colours dense, and if blotched or striped, the marks well defined, not running into each other.

Fifth, the plant the same width across as it is high.

These conditions can only be attained by careful and even growing, without great heat, and by carefully avoiding all sudden changes.

SEED, AND SOWING, SOIL, ETC.

Sow the seeds in the beginning of March, and again in the beginning of April, in wide-mouthed pots, and in a slight hot bed, that is to say, the heat not allowed above 60°. When it does exceed this, open it at the back to let some of the heat out, so that it may not get above 60°. In a very short time these seeds will be up, and then air must be freely given, though the heat may not be too great, but it ought not to be allowed to decline below 45°. If they become drawn in a seed-

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ling state it is very difficult to get them right again. As soon as they get a second pair of leaves they should be carefully transplanted. And here we may say something about the soil to be used from the first to the last. As the best that can be had, we should recommend rotted turves, which have been cut from a loamy rich pasture, and with all the grass fibres and roots decayed in it: this need only be rubbed through a potato sieve; not that we require the earth small, but that it enables us to see any of the troublesome grubs, wire-worms, &c., with which the turf may be infested, and which ought to be caught and killed by hand; for all washes, salts, lime, &c., that might annoy them would alter the character of the soil. By rubbing it through a very coarse sieve, such as the smallest potatoes are sifted through, any large lumps of turf not completely rotted, and also great stones, will be easily taken out and thrown away. If this cannot be got, and clean loam is obliged to be used, half of this added to one-fourth turfy peat and leaf-mould mixed, and one-fourth decomposed cow-dung, will be the next best soil to use; this should by rights lay together some time, and be well mixed together before using; still, rotted turves are to be preferred and no florist should be without a compost, which is more valuable than any other.

When the seedlings get their second pair of leaves, take three-inch pots, and having put crocks one-third of the way up, fill the pots with compost; raise the seedlings in the pots with a piece of flat wood like the blade of a knife, with as much of the earth as hangs on the roots, and, making allowance for the room it will take, make a hole in the centre of the soil in the pot, thrusting the wood down a little way, and press the soil sideways to open a vacancy; plant the seedlings in without disturbing the fibres, and put soil upon it pressing the soil enough to close the earth about the roots; or fill the pots all but an inch of the top, place the seedlings in the centre on the soil, holding it with one hand, while with the other the rest of the soil is put in to fill up the pot, gently pressing it around the sides; water at the same instant so that the plant shall not flag a moment. These pots are all to be replaced in the hot-bed, and covered a few hours with a mat, with the frame closed. They must then have a little air daily, and the frame must be sunk or the soil in it raised, so that the plants be near the glass, and all of them near alike: that is to say, not more than three inches from it. They will grow rapidly, want water frequently, and air must be given them at the back of the frame, by propping up the light half-an-inch or an inch according to the heat of the bed.

As soon as the roots reach the sides of the pots, which will be seen by turning out one of the balls occasionally, prepare pots a size larger, and a few crocks at the bottom of each. Put as much soil on the crocks as will raise the ball to the surface of the pot, then turn them out, one by one, and placing them in the centre of the larger pot, fill in the soil all around it, carefully pressing it down the side without damaging the fibres, and levelling the top of the soil nearly up to the edge of the pot; for watering will sink it a little. These must all be returned to the hot-bed, which will be cooler for the work it has done; and the weather being warmer, it need only be carefully

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closed in bad weather and of a night, and be well protected with a covering of some kind. Now the frame may require raising, to prevent the plants from touching the glass; and it is very easy to do this, not only until the bottom edge of it is as high as the soil, but long afterwards; because, by using turves outside it and propping the frame up at the corners, almost any height may be obtained to give the plants room; but it will be well to prepare another bed or a pit, as the plants advance much in height. As the weather becomes warmer, they will only require the natural heat of a green-house or pit; and in the warm part of the day should have all the air that can be given. When the roots get to the side again the plants must be shifted, in a similar manner, to pots still larger, and these shifts are to be continued as often as the roots reach the side.

The blooming is made a very particular job by some people. They will pick off all the first buds; but if the balsam be allowed to grow naturally in the soil we have mentioned, and we keep them near the glass, and shifted from time to time from one pot to another, the plants will be better allowed to bloom as they are inclined, they will be short, stout, well proportioned, good looking plants from the moment they open a flower. Those who grow for size continue picking off the forwardest buds, but if this be done too much the best flowers will be sacrificed.—*Alpha.*

THE STRIKING OF CUTTINGS.

Curious as it may appear, this operation, which the professional gardener considers a very delicate part of his business, is accomplished by lady gardeners and cottagers with ease and certainty; and although in this, so far as geraniums, hydrangeas, and fuchsias are concerned, there is not much to boast of, the knowledge of country amateurs, as well as their practice, reaches all the plants they can get hold of. A lady's greenhouse and a cottager's windows are by no means limited in the families of plants to which they give shelter and protection. They do not lose anything for want of asking for it, and yet they could no more think of begging for a plant than they would for a loaf; one and all limit their solicitations to "slips," as they are called, and no one thinks of refusing. The consequence of which is, that very limited conveniences preserves scores of genera, species, and varieties, rarely two of a sort. When they procure slips of heath, acacia, fuchsia, chorozema, and even "miffy" hard-wooded plants, they never dream of failing, and talk of them as other people do of plants. We have no doubt such people might be puzzled with some strange subjects, but that the success is nearly universal where they really love plants is a fact not to be disputed; yet we constantly have letters from amateurs, with all the means about them, complaining that they fail in striking this, that, or the other, which cottagers, and old ladies in particular, consider plants the moment they get a bit to strike. Whatever may be said or done in the way of striking, it is quite certain that bottom heat is a great agent, and, given artificially, it promotes rapid development of root. "Oh!" say some of our readers, "how can this be, when I

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strike cuttings in a common border?" Why, the striking of cuttings out of doors is the first proof we shall appeal to. Why do we shade cuttings in the common border? To keep off the heat of the sun, which would make the atmosphere of a higher temperature than the soil. If we desire to strike cuttings in the common borders, shade is indispensable. If we have any difficult or obstinate subjects to strike, we use artificial bottom heat. When we put in the cuttings of gooseberries, currants, vines, and shrubs in autumn, and take no notice of them till they strike, it may seem to some people that our theory is upset; but these cuttings enjoy a fine genial bottom heat, be the weather above what it may. The earth has in it the heat that has accumulated all the summer, hence autumn is recommended for all out-of-door propagation; there is bottom heat all the winter, whereas in the spring and summer, if we do not prevent the sun from warming the atmosphere above the cuttings, they will fail; so that, although we do not give credit to bottom heat for all kinds of cuttings, that is the main agent. In a slip the supply from the plant is cut off; if the sun and air be allowed to exercise their influence on it, and take as much from it as they would were it on the plant, death would be inevitable; but we cover with hand-glasses to prevent evaporation, we shade to keep off the heat, so that the soil in which the cutting is plunged is warmer than the air above it, and roots are promoted by the difference. There is, in fact, no mystery in striking cuttings; but there are plants more difficult to manage than others: some are so hard in the wood that the roots cannot come through unless we take the last year's growth before the wood was matured; others are so soft that they bleed to death if inserted in the ground, and the only way to strike them is to let them welt, and the wound dry before we plunge them into the soil; but in all cases bottom heat is desirable.

Autumn cuttings out of doors do better than spring, because all the autumn and a greater part of the winter the earth is warmer than the atmosphere. We should never be able to strike cuttings in summer if we were not to choose a shady place, or cover with a glass, or shade them from the sun; for while the temperature above is higher than that below, no cutting will strike root. To promote, therefore, the striking of cuttings several points should be attended to. *First*, the soil should be light, rich and porous; *secondly*, it should be kept warmer than the atmosphere surrounding it; *thirdly*, a cutting should be cut at the bottom close up to a joint; *fourthly*, it should be covered from atmospheric influence to prevent evaporation; *fifthly*, if a hard-wooded subject, the last year's growth should be selected. In general the simplest and safest way to strike cuttings is to fill a pot within half-an-inch of the rim with light and rich soil, and put silver-sand half-an-inch thick on the top; saturate this with water, and plunge the cuttings to the bottom of the sand, but not into the soil; cover with a bell glass to keep out the air; wipe it out every morning; keep it plunged in tan, with a genial heat, and keep off the sun; but when anybody talks of striking without, we shall have no difficulty, after hearing what his plan may be, in discovering that the circumstances provide it without artificial means.

AN OLD TEACHER.

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ADVICE TO THE MANAGERS OF EXHIBITIONS.

1st.—Communicate with each other as much as possible, and arrange your days of show so as not to interfere.

2nd.—The instant you fix the days, advertise in the "Midland Florist." It will prevent others fixing on your days.

3rd.—In drawing up your schedule, make as few classes as you can, and give as many prizes as you can in each class.

4th.—Give no prizes for separate subjects that are not really showy. If you do, a large amount may be expended without much aiding the general effect.

5th.—Allow no person to show in two classes of the same nature, nor to show two collections or stands in the same class.

6th.—Remember that local judges, however honest and able, never give satisfaction to their neighbours, nor to distant exhibitors. Get able and independent men, not nurserymen, from a distance.

7th.—Have paid judges if possible, whose practised eye enables them to do justice to the skill of a gardener, as well as to the novelty of a subject.

8th.—Always limit the number of each genus in collections, as "not more than four of one genus" in large ones—"not more than two in twelves"—and only "one in sixes."

9th.—Publish no rules without great consideration; but, once adopted, never depart from them, for it destroys confidence, and weakens your influence.

10th.—Never limit the number of prizes for miscellaneous productions, nor for specimen plants; mention the highest and lowest amounts, and let the judges award according to merit.

11th.—Always pay the prizes on the day of show, and provide a place of meeting for the exhibitors and friends to dine, at as low a price as possible, instead of rambling to different places.

12th.—Arrange everything that competes in separate places, by keeping the classes distinct. Specimens and miscellaneous subjects, which do not compete, but stand on their individual merits, are the only things that may be straggling about.

13th.—Remember that example is everything. Be not content with the publicity given by circulars; advertise the objects the instant you fix the days; the money you spend in advertising does more good, by showing the world what you are doing, than twice the amount given in prizes. A string of announcements of shows gives spirit to the lovers of gardening, and if it does not bring you a shower nor a visitor, it does much good as an example, and sets other people at work to produce horticultural shows.—GLENNY.

THE AURICULA.

As this flower was the subject of an article in your last number, I think the following, which appeared in a work now out of print—"The Handbook of Practical Gardening"—will be acceptable to the readers of the "Midland Florist:"

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"There is a notion gone abroad that the auricula is what florists call 'miffy,' that is, delicate, easily affected for the worse; in short, difficult to grow. Now the mistake is, that it wants so little attention that people do not even give it that little. The soil, loam from rotted turves and decomposed but clean cow-dung, plenty of pure air, little sun, seldom watering in winter, and dry hard bottom to stand on: these, with the protection of a common garden-frame and light, comprise the entire wants of an auricula. It would seem, then, very hard that it could not get these attentions. However, begin growing by purchasing some half-dozen of the best sorts, and two or three of a sort. As it is as well to have but little care or trouble at first, buy them (ready potted and top-dressed for blooming) in November, December, January, or February; the later the better, because you want blooming plants. From the time you may get them, whatever period that may be, they will require only to be kept from excess of frost and moisture, which can be done well by means of a garden-frame and light. Meanwhile, prepare your stuff for re-potting hereafter, by getting turves cut to lay in a heap and rot, as we have already described, and also collect cow-droppings from the meadows, those that have dried by the sun are the best. As the spring advances, and the plants are inclined to grow, let them have a thorough good watering, for they will make rapid progress. They need not, however, be often watered; on the contrary, while the soil is damp they *will* require no more; but if in March and early in April there are warm showers, the plants may have the benefit of them. They should never be covered in mild weather, for they cannot have too much air, but when the sun is powerful they ought to be shaded. As they advance towards blooming, and begin to show flowers, you must reduce the pips to eight or nine, to be ultimately reduced still more, for seven is the best truss, because they, being all of a size, form one centre pip and six round it, all touching edge to edge, and making the most uniform of any possible number. These being reduced, as soon as the foot-stalks are long enough to tuck some very fine moss between them, let it be so tucked between them as to hold all the pips free of each other, that they may be enabled to open without the least interruption or interference with each other; for if they be allowed to expand while in each other's way, there will be no such thing as getting them flat again. When thus prepared for opening, take them to a sheltered place and put them under a hand-glass, with a mat to shade them, but let the edge of the glass be propped up with four flower pots, even with the top rim of the pots they grow in; they have thus plenty of air, while the blooms are protected from blighting winds. They will require plenty of water all the time the flowers are expanding, and they must be examined every day to see that the pips are kept in their places, for it will be found necessary to adjust them by putting the moss a little deeper or shallower, according as you wish to spread or to close up one or other of the pips. The bloom once over, and they want but a hard dry bottom to stand on in a shady place, where they will not be infested with vermin; and if no seed is wanted, pick off the pips singly, leaving the footstalks and main stem

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on the plant to decay. In the event of a rainy season, they must be protected from wet, and in a hot dry season they must be refreshed with water. In the month of August they must be re-potted: get two-thirds of the loam already mentioned, and one-third cow-droppings, rotted into mould, and if upon mixing these well there appears any disposition to be adhesive, which can be told by handling, let there be some silver sand mixed with it. Supposing it to be in good working order, neither wet nor dry, but damp, squeeze a handful into a lump, lay it on the potting-board, and though it ought to hold its shape if undisturbed, a slight pressure on the lump with one finger ought to break it; when in this state it is good, and may be used with confidence. The plants should then be turned out of the pots one by one, and if the roots are white and healthy, and there is no indication of their being pot-bound—that is, the pots too full of roots—they may be re-potted into pots a full size larger without disturbing anything; but if, on the contrary, the earth looks black, the ends of the fibres rotten, or diseased at all, then shake every atom of earth from the roots, cut away all decayed parts, and re-pot in the same sized pot. If the centre or tap root is long, shorten it to an inch and a half, and, above all things, leave not a brown spot on the roots. Cut it all away, if you have to sacrifice the whole root; for better have to strike a new root, than be obliged to have a diseased one. In potting, fill up the pot one-third with crocks, or potsherds, then with compost in the shape of a cone, that is, highest in the middle, up to nearly the top; on this place your root, directing the fibres all round, and keeping the collar of the plant close up to the surface; fill up the pot to within a quarter of an inch of the rim, pressing the stuff down gently all round, striking the pot on the table to settle the earth down a little; and when all are done, place them in a frame, give them a good watering, and close down the light for a day, or even two days, before any air be given to them.

We have now brought them to the winter management; for from now till September, or even October, nothing can be done but giving them plenty of air, and watering them to refresh them until they re-establish themselves, when they have only to be protected from heavy falls of rain. All through the winter, they are to have air at all times, when not absolutely frosty, or windy from the north or east. About February we come to the top-dressing, which was done for you the first year; and for this, in the absence of anything better, cow-dung rotted into mould, and a little sand is good; but if you can get a little thoroughly decomposed poultry dung one part, cow-dung one part, and sand one part, well mixed, it proves the best top-dressings we can have; but it must be thoroughly rotted until you cannot tell it from mould, for if it be not, it will prove too strong. Stir the earth on the surface round the edges with a piece of wood rather sharpened into a flat blade-like stirrer, and do not go deep enough to bruise the fibres. Shake out all the loose, take off the yellow leaves from the bottom, if there be any, and put on the dressing within a little of the top of the rim; water all of them while the top-dressing is a little damp, for if it be once dry, it is the most difficult thing imaginable to

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the crop is lost. We only mention this to show the public the extreme folly of attributing any weight to these collectors of the doleful.

Before we had any scientific alarmists, to put a mysterious face upon these casual visitations, which almost alone check the ambition of man and teach him his nothingness, we had the rust and the smut and the fly and mildew and sundry other fatal enemies to our crops, and regarded them as serious losses; but now that scientific men want to show off their knowledge by discussions and theories and dogmas, to account for visitations of that nature, we are pestered with the most hideous accounts of the disorders first, that we may afterwards hear the causes explained. The potato was doomed as a vegetable; scientific men strongly recommended its abandonment for something else. Abundant potato harvests have falsified their predictions, and, thanks to the contempt which common-sense people have for science, there is so large a quantity planted in spite of advice to the contrary, that if one-half the late potatoes fail and are lost, there is abundance still. Recollect, that if all the bits of intelligence be scraped together from all the papers, and it should appear that a thousand growers are suffering, it would only be a ten-hundredth part of the million that is growing them. And there is no fear but that everybody who can find a plant mildewed, will forthwith furnish some hungry disease-patroniser with his full, true, and particular account. We only hope and trust that it may not again spread so fatally in Ireland as it did in 1846; but thousands of tons of fine potatoes were harvested without a word being said about them, though every failure was carefully recorded, to influence the prices by the general alarm created, until the holders knew not how to ask enough, and overstocked their market, saddled at last with thousands of tons that were consigned to the pigs and cattle.

There is to our mind a wickedness in all endeavours to alarm the public: gross exaggeration is catching; nothing so true as the old saying, "a story never loses by carrying." It is the crying evil of all journalists, that they overdo everything; but it is the fault of the public that they believe one-half that is written. We are inclined to admit the potato disease is worse than it really is; we will say it may increase, and be five times as bad as the alarmists say it is, and even then there will be no scarcity. It falls severely on individuals whose crops are affected, just as mildew upon wheat, or a flood that sweeps away a crop of mown hay; but the markets of the world have no sympathy for individual loss. If the newspapers in general lend themselves to the alarmists, and copy from the class papers, they may frighten the public into buying and raise the price; but the public will be foolish indeed, if they buy a single pound of potatoes more than they can help at an advanced price. A family may live on bread as well as potatoes for their vegetable diet, and green vegetables have been cheap enough in all conscience; it would be next to madness to pay a shilling a hundred-weight more for potatoes than their proportionate value. Leave those who hold up for price with their potatoes on their hands; they will soon cease to rely on the alarmists for an advance.

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THE CERTIFICATE SYSTEM.

Addressed to Midland Florists and Amateurs.

FLORICULTURE has undergone very severe shocks, and it behoves one and all of us to consider now the best means of promoting its healthy progress. If I touch gently on a very sore subject it is only to point out an evil to be avoided in future. It will strike all of you that the certificate system did a good dead of mischief, by inducing men who could ill afford it, to buy novelties which to them proved worthless, and those in the country were sacrificed more than those in the metropolis, for the latter had opportunities of seeing the flowers that were certified, and the majority, indeed all the principal amateurs, have long left off buying anything the year it comes out, unless it has appeared to be backed by authorities conversant with the properties of flowers. A society, however, established for the express purpose of forcing the trade in novelties, was broken up by the unceasing war kept up by one portion of the press, and unfortunately the leaders, though dispersed, have been admitted to a committee of the Horticultural Society, professing to decide upon good and bad things, and keep up the certificate system. It will strike all of you that if the committee were honest and competent it might be of great service, but I fear they are neither. One instance is as good as a hundred. A so-called novelty was submitted not long since, and it was proposed to come out at a very large price. The committee gave it a first-class certificate. If the men who awarded this had been in their own society (now broken up) not one in a hundred would have bought it, but be it known, they gave it as "The Floral Committee of the Horticultural Society of London." At the very next meeting a highly respectable nurseryman attended and produced proofs that the favoured novelty was an *old thing* with a *new name*, and all who ordered or bought it upon the faith of a certificate of the Horticultural Society of London, *were taken in*. I felt obliged to touch upon the certificate system, because it did incalculable mischief. It destroyed all confidence in dealers' descriptions; it caused thousands to decline buying anything the first year it came out; it weaned hundreds of enthusiasts who would care nothing about price for a good subject. When the system was abused by a society of dealers, their certificates were repudiated by all, but now that the Horticultural Society lends its once great name to transactions of this kind, faith in certificates "is no more." What then ought florists to do? I speak of amateurs as well as professional florists. *First*, let them trust to those only who have never deceived by their descriptions of the flowers they have let out, or to those authorities which have never said that a bad thing was a good one. *Next*, let them carry out the suggestion offered last month to meet each other in their neighbourhood to discuss the merits of novelties, and if they meet with one worthy of notice, communicate the fact as publicly as possible. This brings me to a notice of the Central Horticultural Society, (already mentioned

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in this work), which comprises *buyers only*, and meets at Hungerford Hotel, Strand. Here I find flower after flower has been seen and condemned, but has found favour at other places, and though not worth the dirt they were grown in, pronounced first-class. I see, therefore, no alternative but that of abstaining from buying the first year, any flower or plant, however highly recommended by societies to which the old offenders have access; unless you can depend upon the vendor, an exception may be also made in favour of the Central Horticultural Society, from voting at which all dealers are excluded (although admitted to the discussions on the merits) and which therefore has been called a society of buyers, who would certainly never certify a thing that was not worth the money. I would call your attention to one circumstance which must not be lost sight of; recollect that when a raiser of a good pink, carnation, or piccotee, showed his flower about the country, the growers all round became familiar with it, and when the raiser had plants enough, he put his price upon the plants and there were always buyers enough to take his stock; everyone who bought knew that he had one pair of twenty, thirty, or thereabouts, and the next year had a pair or two to dispose of, and perhaps got back his purchase money. But now the large nurserymen hunt about, give a trifle for a very poor thing, that would not bear too close an acquaintance, multiply it till they can pick blooms to show out of an immense stock (for a very poor variety will sometimes throw a decent flower), get it certified without difficulty, and then advertise it for sale. In such cases a buyer knows no more what he has got than he knows the inside of an egg, but if it be by accident a good one, he has only got one pair out of hundreds, instead of one of twenty, and he has no more chance of getting any of the money back by sales than he has of becoming Lord Lieutenant of Ireland. Now it is this system of buying up and propagating to excess that I object to. It gives the first buyers no chance except that of being "taken in and done for." Therefore I say to those who are raisers, take care that the good things are seen, and if your fellow florists and amateurs like it, let no trifling sum tempt you to part from your prize. Do as your predecessors have done, propagate it till you have twenty or thirty pairs, and if it be better than you have got, there will be no difficulty in getting subscribers at a guinea a pair, as I have seen many a time. But the growers knew what they were buying, they had a genuine share of one twentieth or thirtieth as the case may be, of the whole stock of a flower. Such a case as this has been of frequent occurrence; A. B. raised a good flower, it was talked of at social meetings, everyone who took an interest in a good thing, and was within reasonable distance, went to see it; the raiser exhibited it at shows when he could, and all those who had seen it looked anxiously for it the second year, and perhaps the raiser had two or three pairs. It turned out a safe as well as a good flower, and A. B. said if he could make twenty pairs he would let out the stock to twenty subscribers at a guinea the pair. The subscribers were found directly, for nobody begrudges money for a reasonable share of a good thing.

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Well, the next year every holder had four or five pairs, but the thing had got noised about, and the hundreds who had not got it wanted it. The price fixed was seven shillings and sixpence. The subscribers contrived to get their money back, for as there were but twenty who had got it, they could all get rid of as many as they chose to spare, besides keeping a larger stock than the second buyers. Well, another year comes round, the flower is still up to the mark and a favourite, the thousands who could neither give a guinea nor seven shillings and sixpence are glad to get it at half-a-crown, and in this way every buyer knows what he is about, and is content. A. B. however raises another not so good, his friends tell him it will not do, a nurseryman sees it and offers him a trifle which he is glad to take; the stock is taken away and not heard of for a year, in fact is forgotten by all who saw it; the next season there is BROWN'S or JONES' or SMITH'S Nancy Dawson or Nell Gwynne exhibited at one of the hole-and-corner societies, and has a first-class certificate. Advertisements extolling the thing to the skies appear in every publication. Those who do not like to miss a good thing are afraid to let it go by, and so hundreds buy it at five shillings—cheap for a new fine flower—if there are only twenty pairs to buy, but dear even if it were good, when your pair is one of five hundred. But the worst is to come, the flower is worthless, everyone who bought it has been wilfully cheated, and in one case the very man who raised the flower was among the victims; a new owner, a new place, and a new name, completely deceived him. I mention these things because cases in all respects similar have been numerous, and my object is, if possible, to confine the trade in new flowers to the raiser and his earliest buyers, and because also I wish men to conclude from these cases that there is not the slightest dependence to be placed on a flower that has been certified, nor in the descriptions given of it by the large traders in novelties. I am not original in my ideas; the subject has been broached in other works, perhaps not so mildly, and the advice has been acted upon for a long time by a large number of amateurs. Well then, it behoves all who wish to advance Floriculture to persevere in the same course. Try all you can to make a good flower known, resist every temptation to buy a novelty without good authority for its quality. If it has been shown at the Central Horticultural Society you can have their report of it in writing, even if it was rejected, and if it is offered by a metropolitan dealer, rest assured if it has not been shown there, it has been from a conviction that it would not stand the test of a board composed of buyers. It is no use blinking this matter, a novelty must be beyond all doubt good to be bought by amateurs. Every owner has it in his power to establish its character by simply exhibiting it before competent as well as disinterested judges. Nay, they are hardly disinterested, for such is the love of amateurs for a good flower, that they are strongly interested in giving it a good character, and as the judgment is taken by ballot among all the members present, it may be assumed that in a multitude of council there is wisdom, and that the decision is just.

FELTON.

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COCHINEAL.

COCHINEAL insects are natives of Mexico, were they were raised by the Mexican Indians, long before the country was discovered by the Spaniards. It is now cultivated in some of the West India Islands, and in Georgia and South Carolina: but it is in Mexico only that it is raised in sufficient quantities to form an article of commerce. It is most extensively cultivated at Oaxaca, which is one of the most delightful countries in that part of the globe.

This insect is reared on the Indian fig-tree, or nopal, which is a species of cactus. The nopal is a plant consisting of stems, the buds of which are covered with little prickles, These buds expand into wide, thick leaves, which are planted two or three feet from each other, and inoculated with the cochineal.

The natives, where these creatures are produced, raise plantations of the nopal near their dwellings. It grows freely from cuttings; and these are fit to receive the insect after eighteen months. Into a small nest, formed of some thread-like substance, or cottony matter, a few females are placed, about the middle of October. These nests are affixed to the nopal, on the side facing the rising sun.

The eggs are soon laid and hatched; and as each female produces upwards of a thousand eggs, a large colony of these little creatures soon spread over the tree. It is said that six generations of them are produced in a single year.

On first leaving the egg, the insects of both sexes are quite active, and run about among the leaves and branches of the trees. They are so small, however, at that time, that they cannot be seen without the aid of a microscope. They are flat, ovular, without wings, and with short antennæ, or horns. The females have a small, short, and almost conical beak, placed between the first and second pair of feet, which contains a sucker. It is by means of this that they draw forth the juices of the leaves and tender stems.

When the female insect has reached what is called its perfect state, it is filled with a multitude of very minute eggs. Having laid her eggs, the female never moves from her place, but dies, and her body becomes a covering for the eggs until they are hatched. When this is done, the young insects work their way out, and commence feeding. After a short time their skins harden, and serve as a cocoon. From this appearance they pass into a chrysalis state, and soon after appear as the perfect insect.

The cochineal is first collected about the middle of December. The insects are removed from the nopal with a knife, the edge of which has been blunted, or are carefully brushed off. This labour is performed by the Indian women, who often sit for hours together by the side of a single plant.

The insects are usually killed by the application of heat; sometimes by baking them in ovens. When the cochineal arrives in the market, it is in the form of a small grain, having a convex and a concave side, but with very little resemblance to the body of an insect.

Cochineal is used for dyeing crimson and scarlet, and for making

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carmine. Cochineal, alone, yields a purple colour, which, by mixing with it a solution of tin in nitro-muriatic acid, may be changed to a most beautiful scarlet, We have seen these insects at Kew, and there is no difficulty in cultivating the plant; in fact, it is plentiful enough in this country, but we never saw the cochineal insect—and in a plant house of ours, we do not wish to see it, we hate insects on plants.

CACTUS.

ADVICE TO THE BUYERS OF PLANTS AND FLOWERS, FRUITS AND SEEDS.

1. Look at your gardening bills for the last twenty years, and observe how much you have laid out for novelties; which of them remain part of your stock now; what sort of character the vendor gave with them; and what value you place on his judgment.

2. Go into particulars a little more, and see how many of your purchases were made on our annual recommendation—how many of the subjects we recommended have disappointed you.

3. While rambling among the pounds, shillings, and pence, and the productions they purchased, calculate how much you would have saved had you bought only what we suggested. And, while observing how much money you would have saved, notice whether during the whole twenty years, you would have missed half-a-dozen good subjects. So much for the past. Now for the future. We have tried for the last twenty years to be of use to the man of limited means who is fond of gardening. However ambitious he may be, he cannot afford to buy all the new things, perhaps not more than one or two: now we advise him to—

4. Look through all the trade catalogues, and tell us honestly whether he can depend on a solitary variety in any one family from the descriptions. On the contrary, whether there is not abundance of "first class flowers," "show varieties," subjects "superior to any of their class," "first rate novelties," and so on ad infinitum, and whether he can by himself select one that he can feel confidence in giving novelty price for without wasting his money.

5. Presuming that he has an opportunity of seeing the lists we recommend, and finds two or three of *this*—instead of as many dozen—three or four of *that*, instead of a hundred, and so on through the chief families, will he not admit that his task of selection is rendered less difficult? And when he knows that he cannot select a bad one, will he not admit the difficulty is altogether got over?

6. Balancing as we go on is a good plan: therefore let any industrious reader trace all the flowers, plants, &c., that we have recommended for the last twenty years, and see how many were unjustly praised, and then turn back to the catalogues of the best man he knows for the same time, and apply the same test: at the same time, he must bear in mind that ours have been selected from all the thousands that have been annually raised, instead of the few that come under the notice of a dealer.—GLENNY'S COMPANION.

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THE FAULTS IN DAHLIAS.

THE worst fault there can be is an open yellow disc, the next is an unbloomed eye, the third in point of disparagement is a confused eye, the fourth is a sunk eye, the fifth, an indented outline, the sixth is want of doubleness, the seventh is want of symmetry, the eighth is a flat face, the ninth is an indented petal, the tenth is a ribbed petal, the eleventh is bad back petals, the twelfth is reflexed petals. Any one of the first four faults, ought to disqualify a flower, and consequently a stand; and it is a strange fact that, although there are many flowers in the best stands that are sunk-eyed, these faults are overlooked altogether,—as if size, which is the very last point, were to be appreciated before everything. In a stand there is one other fault—a sameness in the colours; and lastly, a want of arrangement or uniformity, about which we have said so much that we are almost ashamed to repeat our directions. Begin at the middle or at the ends; let the colours always contrast as well as you can, make the flowers range, say the end of the top row is light, let the other end be light also, the next inwards, dark at both ends, the third from the end, light again, and the fourth dark, which brings the two centre ones dark. The next row is to be made up exactly contrary, dark under light, and light under dark, and two light ones come in the centre; the lower row is to be made the same as the top. The arrangement makes a stand look bright and clean. But too much weight is given against reflexed petals, when the few flowers that are so are generally, if not always, possessed of all the other points.

AN EARLY GROWER.

GARDEN ALMANACKS.

ALL but the original, now in its twenty-fourth year of publication, appear like shooting stars, make a blaze for a time and disappear. The only one that stood any time was a close imitation of the original, and for the most part all that was valuable was actually copied. Moreover, as it was published three weeks after the real, there was every opportunity of profiting by what was published the same year. But we hear little of it now. The United Gardeners had one and failed. Harrison ditto. Even half-price tempted nobody. Edwards made a great effort and clothed his in blue and gold, but the failure was as complete as that of the others. Messrs. Dobson and Son published one last year, but we have seen none this January; like the others they probably made enough money the first time not to require another. The printers of the "Gardeners' Gazette" have put out, one on their own account, partly filched from the original, but it is more like an ironmonger's catalogue than a garden sheet. Messrs. Peter Lawson and Son have turned out a very good looking sheet with a finely-coloured plate of a conservatory, and there is nothing copied, nor is its respectability sullied by advertisements; it has valuable meteorological information, a selection of new fruits, and the usual

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almanack matter. It is a pictorial ornament to the counting-house. But in the midst of all these the "Midland Florists' Almanack" stands rather prominently just now, because it is made a valuable introduction to the new volume. There is no attempt to imitate anyone. The monthly operations for the whole year is not a whit like any of its predecessors. It is comprehensive though short, and comprises as much in a little compass as can be found in any work, the "Handy Book on Gardening" excepted, for that stands alone, unlike anything but itself, and is every way adapted for the readers of this work. There is hardly anything to which we have to refer but it may be found; and as there are five hundred less printed than there is of the January number, it will be out of print before the late applicants are supplied. Every trade has now its almanack. Perfumers were earliest in the field, and Hannay's was the first that was put fortward respectably. But one hates to see in every page physic and perfumery; yet other people may feel equally tired of flowers. The "Midland Florists'" may, however, be tolerated by everybody who loves a garden; but it will be especially welcome to the readers of this work, and to them, if to no others, we may honestly recommend it; for, independently of almanack matter, there are two or three articles that should be read and treasured up for the advice and information they contain.

MIDDLE MEN USEFUL.

A Horticultural Agent can be very useful to buyers and sellers; for hundreds want what they do not know where to get, and other hundreds have to sell what their ordinary customers cannot take,—the stock grows out of money, or spoils, or is thrown away. Another great point gained, is, when the agent can be depended on for the quality of what he procures. Some thousand pounds' worth of seeds, plants, trees, and shrubs, have changed hands the last year, by the simple process of one authorising a party to sell, and the other to buy.

The order given, the agent either refers at once to the grower, who has it, or he procures it, and furthers it to its destination. He has this advantage over ordinary tradesmen: if a good thing is wanted, he knows where he can get it best: and if a dozen is required, he can, if necessary, get it from different people who have each something of the best quality, even if the rest of the stock was bad.

"USED UP."

THIS very discouraging description of an old gardener grated on our ear when applied to an old servant in a family, where the younger branch came into power, although the old fellow's mental capacity was in no way damaged, but on the contrary as vigorous as ever, and his judgment improved by every year he had lived. If it had been in one of those puddling establishments where only one man was employed, we could perfectly understand that the old gentleman could not rough it so well as a younger man; but this happened where a number of men were employed, and all that was wanted was experi-

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ence and sound judgment to direct. For our part, we only saw this difference in the retiring man and his successor: the one was a steady, experienced, and first class gardener, whose physical strength was unequal to hard work; the other was one of those conceited puppies which they used to examine and turn out from Chiswick, who, active as he might be, contented himself with giving directions, and never worked a jot more than his predecessor. The employer, therefore, got no more work done by the man of thirty than was done for his father by the man of sixty, and with this great drawback: the young man did not know half so much as the old one, nor dirt his hands with work. He could read in his cottage what others had written, and write some of it over again to send to the paper, but he was never seen with a tool in his hand, except his pruning knife, the new shine of which was hardly dulled at the end of the year. His notion of a head gardener was that he should order others to do the work, and he merely look on and approve. He was lucky in finding a staff that had been drilled by the old man, and therefore things went on much the same as they did under his predecessor, who though inferior in strength, was worth a hundred such upstarts for the direction and superintendence of an establishment. We, therefore, caution people against fancying that a head gardener is used up while he can look round the houses and crops, and give his directions. He is better instead of worse fitted for the office as he advances in years, so long as his intellect is unimpaired; for it is next to impossible for a man who is fond of his business to follow it up without improving every year of his life; and he who changes a good old gardener, however impaired his physical powers, under the stupid notion that he is "used up," deserves to have no better than one of the Chiswick dandies, who could no more dig a rod of ground, plant a box edging, or graft a common apple tree as it ought to be done than he could kill and dress an ox. There is a species of refined cruelty in unnecessarily reminding a man of his infirmities, and the more particularly when they do not affect his value as a servant. A man's former exertions ought not to be forgotten. It is bad enough to superannuate him with a pension, but to send him adrift, because he is said to be "used up," and to replace him with a counterfeit, was ten times worse. "Young gentleman"—for though this applies to many, it is for one to whom we promised a rub—"your father would never have turned away the old gentleman while he could watch the whole concerns, and give his orders; and if he had at last got rid of him, he would have continued his salary till the day of his death." However, the old man is worth his money any day, where there are a few men kept, and will be wished back at his old home before the kid-gloved successor has had two seasons.

FLORA EVERYWHERE.

I NEVER think of the divided state of our floral community without pain; when I have accidentaly met two or three gardening friends and spent a few agreeable hours discussing the merits of our favourites, I

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have mentally exclaimed, "Why should it not often fall to our lot?" How easily could an evening every week be rendered happy, by a few of us resolving to attend at a given time and place. Once do this, and the pleasurable recollection would secure another meeting; others would hear of it and be invited. In the east of London this is done to a great extent, I cannot say how often I have been to one or other of these meetings of florists, and I wish they were general all over the country. Cannot you, Mr. Editor, who have already broached the subject, follow it up by urging the readers of the "Midland" to meet some where. Those in Nottingham might form a fine social party. It is not for me to dictate where they should meet, but I am quite sure that it would tend greatly to the advance of genuine floriculture. In London, I observe you have founded head quarters at the Hungerford Hotel, where you receive and decide on the merits of new subjects, and for such purpose as this, I think the exclusion of dealers from becoming members is a new feature, from which I augur great things. It is curious that every society established with that view has failed, and why? because they were first over-run with dealers who voted every novelty they produced first rate, and then by expensive advertising took in all the buyers. This abuse of the societies rendered their certificates useless, and then they broke up. I can remember at least half-a-dozen, and all failed; on this account, I think the exclusion of dealers from power and receiving them as visitors only, you have the benefit of their experience in conversation. Some of my friends here, said, "Why exclude all? surely some dealers are respectable," but I observe, "what an invidious task it would be to admit some and reject others, whereas, admitting none under any pretence whatever, can offend nobody." The society comprises amateurs and gentlemen gardeners, but dealers are invited to attend meetings, and produce novelties for show, and the fate of those novelties is decided by ballot among the members only, the members being the class to be gratified or robbed, according as a novelty turns out; if, therefore, they decide in favor of anything, the public may safely buy to any extent, because the judges are buyers, and know best whether they consider it worth the novelty price. Why then may we not have such societies in the country? If they are not carried on in quite such style, we may surely meet and see each others' productions, and if any should appear to be first rate in our eyes, we might send it to the centre floricultural society for that best of all tests, the unbiased judgment of a society of buyers. But grant that we may not have strength in some localities to form such a society, I maintain that the few amateurs and gardeners of every locality could meet once a week, and chat over garden affairs much to each others' amusement and benefit, and I hope to hear through your pages of some local meetings, and that the example will be followed in every place where half-a-dozen can be got together. Pray urge this; there is no good reason why there should not be a little floricultural coterie in every town and village in the kingdom, such is the honest opinion of

A WEAVER, NOTTINGHAM.

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THE GARDEN DAISY AND ITS CULTURE.

THE double varieties are the only ones cultivated in gardens. They may be classed among the very few subjects that form good edgings to beds, borders, and clumps. They are constantly spreading or increasing by offsets, which root of themselves, and therefore separate with the greatest facility; they may be planted for edgings four inches apart, and in one season they join by spreading. They grow in any kind of soil, and bloom freely half the year. There are many very distinct varieties, from dark red to white, with stiff quilled petals, and others of the colour with flat but narrow petals, making a better formed flower. There are also monster kinds of flowers with blossoms all round the large one; these are commonly called hen and chicken daises. The roots should be parted so that there shall be only one heart in any piece; those may be planted out in beds six inches apart, or on the edges which they are to form four inches apart, merely being dibbled in and the earth well closed about their roots, and here they may remain until they are too thick; these roots are generally quite large enough to part into half-a-dozen or more separate plants, by merely tearing the hearts asunder with their roots to them, and if any of them happen to come away without any root, it will soon strike new ones. In forming edgings, regard must be had to the color and seasons; they ought not to be mixed, but when used for edgings to geometrical or uniform gardens, the different colours may be used to the different beds, taking care that the same colour is used uniformly to give a proper effect. Thus, if the beds be formed in series of six alike, not less than three should be of a colour, and those alternately; if they are in series of eight, they should be four alike, and they alternately; nothing is more offensive to the eye than an awkward and un-uniform disposition of colours. If this neglected plant, however, were not so common, it would rank before a hundred less brilliant subjects, and less permanent bloomers, for it possesses some advantage over many other subjects; its extreme hardiness, its indifference to where it is placed, or in what it is grown, and the length of time it continues in flower, give it high claims as a plant for edgings, or to plant in masses where dwarfness is an object. Of late there has been a good deal of seed imported from Belgium and Germany; in general, this is called double, and in a batch of seedlings many double ones may be picked out. The generality of these, however, are of no decided colour, most of them are speckled pale rose, or the Piedmont colour, but we found some pure white, very pretty in form, rather inclined to be flat than otherwise, but we would rather have our old English kinds, because as a general feature they are larger, rounder on the face, and the colours more decided. The double crimson, double white, and some few others are very showy; nevertheless, the Belgium kinds are very pretty, and a pinch of seed will give a good stock of double ones. The seed may be sown in the open border or bed, as thinly as possible, and when large enough planted out, but as they bloom when very small, we allow them to flower in the seed bed; if double we carefully remove them to their proper quarters, and if single or semi-double throw them away as fast as they appear. You never need sow a second time, for thousands of seedlings will spring up where they are allowed to bloom.

FORCING FLOWERS, PLANTS AND FRUITS.

It has been asserted, and to this day acted upon by many, that forcing so much weakens plants, that it requires a season or two to bring them round again. This strange notion tends to the evil it sets out upon, and causes what is, thereafter, considered proved by the result. Let us take a very favourite subject, more mismanaged in the forcing than many, and yet calculated to prove our case better than any other, because it is so easily tried by all classes.

The Rose.—Suppose we go to the flower markets for forced roses, we invariably find them very much drawn; the shoots weakly, the stems unable to support the flowers: these have no sooner done flowering than they are almost worthless, and why? Because they have been violently forced. They have been grown in the open ground until the very season they are required to be put out of their way; they are necessarily forced violently, have to do four or five months' work in two months, and, consequently, cannot do it so well. They cannot in two months' driving grow so strong as when they have their natural time to do it in; they are every way depreciated—but let us do the forcing as it should be done, and they will grow as strong and as full of bloom, and be as ready to be forced again seven years running, and improve every year, as if they were in their own open ground. The truth is, that roses want two, if not three seasons to prepare them. Select strong young plants, pot them in strong loam and dung, with good room for their roots; plunge them in the open air until December; now put them in a green-house, prune all the strong wood into the lowest two eyes, cut out close all the thin weakly shoots, and see that they have the genial warmth of the green-house, plenty of air when the weather is warm enough to do it safely, and water occasionally, and the shoots will soon push strong and well; let any that come out weakly from different parts of the tree or bush be rubbed off, they are of no use, and only weaken those which are. Of course they will be much forwarder than those in the open air, and especially if the weather be cold; as soon as the buds appear, remove them. The plant must not be weakened by blooming; let there be abundance of water to sustain the growth, and as soon as May is pretty nearly out, plunge them to their rims in the open ground, taking great care that they do not suffer for want of water: when the growth is completed, and the leaves are fully developed, and their shoots at full length, let there be no more water given; the wood will soon ripen, and the leaves will have fallen long before the plants that have been all through their growth in the open air. When the leaves have fallen, the plants may be looked upon as at rest; they may be removed into the shade. In November the roots may be examined, that is to say, the balls turned out; and if the roots are matted round the pot, they must be shifted to pots of a larger size, without disturbing the ball. All the strong branches may be again shortened to two eyes, all the weakly ones cut close again; they may be placed in the green-house at once, which will be a month sooner than they were the previous year. They will soon start again; they must be guarded from frost, or any near approach to it, as jealously as a tender plant; they will

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show their buds much sooner this year than they did last, and you would find them, if allowed to go on to bloom, very respectably grown compared to forced roses generally,—but we take off the buds as soon as we can get hold of them, again to throw all their strength into the growth. They will this year be fully established, their growth will be strong, they may be plunged in the open air again at the end of May, and be carefully tended as to water, till their growth is complete, and the leaves are turning; now comes another season of rest, far earlier than they rested last year. In due time, when the leaves are fallen, remove them to the shade again, to abide the period of being set to work; again examine the balls, and if the roots are matted, change their pots to a larger size, keeping to strong loam and dung for their compost. They may be housed this time in October, pruned as before, and allowed to grow; syringe them if there is any appearance of green fly, and if this does not clear them, fumigate them with tobacco-smoke, and syringe them afterwards. They will make rapid advances—let the house be kept through the winter at forty-five degrees in the day, and forty at night; whenever air can be given, and the temperature kept to this, be it so, for they cannot have too much air. The trees or bushes will continue their growth, and go up to bloom, without drawing, or weakening at all; and when in flower they should be kept in a temperature not exceeding forty-five degrees. It will be found that these roses want no more support than out-of-door ones in their proper season; and, moreover, they will have now been brought into a regular early growth, which should be kept up: they will have made their growth months before those out of doors, consequently will begin their rest months before them, and the early seasons may be preserved as long as you please. The seasons, with all things, may thus be completely changed. So much for roses, but it is the same with—

Rhododendrons and Azaleas.—Serve them the same as roses; select them early, let them begin their growth earlier; destroy the bloom the first season or two, let them make their growth earlier, and set their bloom, and about the third season you will have done what you have done for the roses. Nobody can for a moment suppose that plants can be forced completely out of their season, by two months, without some violence; but if you take two or three seasons to prepare them for the change of climate, it is the same with these as with many other subjects.

Vines.—Who that expects to force grapes early will do all at once? But when vines are forced a little earlier each year, and you take several years to bring them forward, a little earlier each season, you can in time bring them to anything; therefore due regard should be had to doing everything by degrees. The first year, bring them a month earlier; the second year, bring them two months earlier; and so by degrees you may almost reverse the seasons of a house of vines, and keep them up to it as healthily and as regularly as the ordinary vine in ordinary seasons.

Fruit Trees in pots are just the same; when you have, after repeated forcings, brought them to the season you want, they will come to it as regularly as you can wish, and all you have to do is to pro-

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vide them proper pot-room, and no more. So far from being the worse for forcing, they are the better for it; they rarely miss making and ripening their wood, they seldom fail producing plenty of fruit-buds, and, when set to work at the proper time, seldom fail to produce their regular fruit in season.

Peach and Nectarine Houses.—How would these things prosper if they were the worse for forcing, when forcing is their annual lot? There never was a more mistaken notion; but the truth is, that the effect of doing a thing improperly is seen, and then it is assumed by the ignorant that a subject is the worse, without once thinking that the difference between doing a thing properly and improperly is all that can be spoken of.

Forcing in general is improperly conducted; subjects are potted, they are selected with plenty of bloom-buds upon them; they are often moved from the cold garden or cold frame to the forcing-house, set to work quicker than is good for them, and driven twice as hard as they ought to be; their flowers come out enough to answer the temporary purpose of sale, or a short period of bloom for ornament, and the plants all but die under the effort; whereas, if they were gradually inured to it, brought by degrees to the transition, and season after season for the same purposes, they would be found as tractable as those bloomed in their proper season, and they would come year after year better instead of worse. Certain it is, that if plants are jumped out of beds into pots, and out of pits into warm houses, they have not a common chance of doing moderately well, and when they have done all they can they are too weak to recover their strength for some time; this is not the consequence of forcing, but the consequence of forcing improperly, and the sooner the silly notion and the bad management are got rid of, the better.

A PACKET OF SEED SOWED BY AN OLD GARDENER.

Our readers will recollect the title of a work for which the late Mr. Beck had the credit of authorship, though it was denied by some. It was the life of one Gregory, an exemplary gardener, who fought his way through the world under many disadvantages, but showed an example that might be followed with advantage; we had already given our opinion of the work when the first edition appeared, the second now just published has been considerably enlarged by the addition of matter of a similar character, from a further supply of old Gregory's papers; the worst thing we have, however, to notice, is the death of Mr. Beck a day or two before the second edition issued from the press. Mr. Beck was one of the most successful raisers of the pelargonium, and many of his varieties will long be favorites, even after a considerable number of novelties are added to our stock of show flowers; but as he appeared to be in advance of others, there must be in the stock he leaves behind many fine novelties. Mr. Beck was also the original ostensible editor and proprietor of the "Florist," which was sold into very incompetent hands, and became a mere vehicle for

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portraits a vast deal more handsome than the flowers they pretended to represent, a sort of illustrated trade catalogue, in which, as words of praise had been worn threadbare, coloured pictures were used to give a false and highly colored notion of the things they were supposed to present to the readers. The only thing that prevented them from deceiving many was the fact, that all the florists' flowers were the shape that they ought to be, instead the shape they really were, and people of common sense knew that must be wrong. However, it answers its purpose, because the simpletons who like pretty pictures are always plentiful enough to buy three or four hundred; therefore, although greatly fallen, the "Florist" outlives its founder. Mr. Beck was highly respected, and has left a blank not easily filled up; his demise clothes his last work with an interest which it would not have possessed had he lived.

HARDY EVERGREENS.

We do not wish to fill our book with reports of all the mischief that has been done these two or three weeks by a very severe frost, but we call attention to all those evergreens that have escaped material injury, because there are some persons who would on no account have a single tree subject to damage, by even so severe a winter as the present. We have travelled about a good deal, and we strongly recommend all planters to do the same, with a view to note things that have escaped; and among these we see some of the best things—deodars, criptomeria, arbor vitæ, yews, Irish and English, common arbutus, berberis, all the hollies; and among the things awfully damaged or cut down altogether, we may put laurels, laurustinas, bays, euonimus, and acubas; we have not come across Wellingtonias (so called, but for what reason we are not told), in any exposed situation, except small and in pots not plunged, these appear to have suffered; but we have no doubt that when established they are hardy enough; we shall be glad to hear from others the fate of the most popular evergreens, for those which are spoiled by a hard winter mkae sad blotches in a good shrubbery.

MAHONIA OR BERBERIS.

This is one of the prettiest evergreens in cultivation, at first known as the berberis, but since by some called mahonia. Seedling varieties are becoming plentiful in this country, and doubtless we shall have them much less like each other by-and-by than the species, as they are called, are at this time. The varieties or species most familiar at first were

Mahonia Aquifolium, known as *Berberis Aquifolium*.

Mahonia fascicularis, known as *Berberis primata* and *mahonia diversifolia*.

Mahonia nervosa, known as *Berberis nervosa* and *mahonia glumacea*.

Mahonia repens, known as *Berberis repens*.

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We have seen a bed of seedlings exhibiting a greater variety of foliage than these four present. The soil the plant thrives best in is that adapted for American plants; but it may be stronger with the loam, for they will grow very well on one-half turfy peat and one-half sandy loam, nay, they will grow in almost any soil. The plant requires no other care after planting than enough to see that it does not flag for water in the heat of the first summer; and as branches are very apt to shoot off, and leave the rest of the plant stunted, care must be taken to stop anything of this sort directly, by cutting the branch back, and, if necessary, off altogether. It is one of the best of the moderately dwarf plants, that are so useful in diversifying the front borders, for no plant will better bear the knife if it be required to be cut in. Their yellow bloom is beautifully distributed over the plants at the end of every shoot; and in the spring the golden branches have a rich appearance. No plant is more easily propagated. Cuttings of ripened wood will strike freely under a hand-glass in a shady border, and the lower branches root very soon when layered. Indeed, it may often, if not generally, be torn off the parent plant, and will bring away enough root with it to live, if planted where it is to remain; but as the lower branches can be pegged down under the surface without spoiling the appearance—for they are always feathered to the ground—it is better alway to do so, because they form a better root, and feel their remove less. The seeds are ripened within purple berries, that look as pretty as the flowers; and when they are about to fall, they should be gathered, and saved in a dry place. The seeds may be washed out, and sown in large-mouthed pots, in the early spring, and kept in a cold frame or green-house. When they are up and large enough to lay hold of, they may be planted out an inch apart, and be allowed to establish themselves and grow until they touch each other, or near about it, when they may be planted out in proper beds, which can be hooped over, to protect the growing plants through the winter, for in mild weather they do not cease growing. It is absolutely necessary, therefore, to keep the frost from the young growth; for however hardy the tree may be in a general way, the young branches may be easily cut off by cold winds or hard frost. In these beds they ought to be planted about six inches apart all over the surface, which is most convenient when four feet wide or thereabouts. In this bed they may stand two or three seasons; in fact, until they touch or nearly touch each other. From this bed they may be planted where they are to remain, or be transplanted into another bed a foot apart; but they will require no more protection, unless there are any very hard frosts indeed; for the plant is turned out into shrubberies as soon as it is large enough, and does not appear to be at all injured by the ordinary winters. The plants struck from cuttings may be planted out in just the same manner, and be treated in the same way until they touch each other, when it is quite time to move them into a similar bed, and double the distance from each other. The shrub sets off a border so well, and gives such an excellent diversity among the very good things we have got as fit for the foreground in well laid out shrubberies, that we should be very much inclined to plant liberally

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of them, not less for their diversity of foliage than the different disposition of the flowers. The plants raised from layers will be, of course, larger than those from seed and those from cuttings, and require a greater distance accordingly. These shrubs are, without exception, the best of all for underwood in preserves, they grow freely under trees in almost any soil short of clay, and any one disposed to multiply varieties might find fifty excuses in a bed of seedlings. We have only treated of the rough hardy kinds that will grow anywhere.

FLORISTS v. BOTANISTS.

Florists have always been at war with botanists; and there was a time when botanists openly lectured against the crosses bred by florists, because they tended to confuse the species; and scarcely was a plant noticed by the different botanical works, than the florists seized upon it as fair game, and either produced double flowers, or new varieties of very distinct character, so that the original species was lost or confounded in a phalanx of improved kinds far more distinct from each other than the species which had engaged the attention of botanists and artists to show off their distinctive characters. This evil existed of old. The florists were ridiculed for their want of taste and their opposition to science. Their best varieties were called monsters, and the lovers of all the deformities of nature were entertained, from time to time, with pictures and descriptions of plants in comparison with which our wild flowers and weeds were handsome. When the dahlia was introduced in its wild state, there were several seedling varieties brought from Mexico, but they were ushered forth with all the pomp of distinct species. The florists no sooner took in hand the cultivation of the plant than they produced hundreds of varieties, far more distinct from all the species, and from each other, than any two of the subjects so scientifically announced to the world. Let us turn back to the olden times: nay, up to a late period, the botanists stuck to their miscalled *species*, so we need not go very far. In Paxton's Botanical Dictionary, edited by him and Dr. Lindley, we find the following:—

Dahlia	Cervantesii	Scarlet, from Mexico.
Ditto	Crocata	Scarlet, ditto.
Ditto	Frustranea	Scarlet, ditto.
Ditto	Frustranea Aurantia . .	Orange, ditto.
Ditto	Frustranea Crocea . .	Yellow, ditto.
Ditto	Frustranea Lutea . .	Sulphur, ditto.
Ditto	Superflua	Purple, ditto.

And in a sort of appendix to the work, for omissions and subsequent arrivals or discoveries, we have—

Dahlia	Barkeriæ	Blush.
Ditto	Excelsa Anemonæflora, . .	Light, from Mexico.
Ditto	Glabrata	Lilac, ditto.
Ditto	Scapigera	White, ditto.

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We are not going to criticise the dictionary, or we might be inclined to condemn an authority that gives us the dahlia as a hardy plant, when it is well known that we have not a more tender thing in British gardens. True, they do allow that Excelsa Anemonæflora is a greenhouse species, although it is the only one that is not pronounced hardy, and is well known to be quite as hardy as the rest. However, as we before observed, our object is not to criticise the dictionary, but to ridicule the idea of calling all the above distinct species, while there is not the slightest distinction in any one of them that may not be found in any batch of seedlings saved from common flowers, any year within the last forty years. The Anemonæflora, and, indeed, all the misshapen things that were as useless as the original varieties, have long been banished from the florist's gardens; but it is not too much to say that five hundred, if not five thousand varieties, far more distinct from each other than the varieties originally dignified as species, have been raised and cultivated, when it was the fashion to have large collections. The model of the flower is, however, becoming so splendid, and the taste of the public so improved, that few florists, even among those in trade, grow more than a hundred, and those quite the best. It is true that there are sixty or seventy new ones put out every season, nine out of ten of which are grossly misrepresented to cheat the purchasers, and we hear no more of them after the first season; dealers in dahlias are scrupulously religious, we wish they would do unto others as they would others should do unto them.

DIELYTRA SPECTABILIS.

Dielytra spectabilis, De Candolle (showy Dielytra).—Fumariaceæ § Fumarieæ.

This exceedingly graceful plant is one of Mr. Fortune's introductions from the gardens of the north of China, where, in the fairy gardens of the mandarins, he found it to be very extensively cultivated. The species appears to be recognised as a native of Siberia, and was first made known to European botanists "by the Russo-Siberian, De Karamyschew, who, studying at Upsal, communicated it to Linnæus." By Linnæus it was called *Fumaria spectabilis*, and it has obtained other names from other botanists, namely, *Corydalis spectabilis*, (Persoon), and *Capnorchis spectabilis* (Borkhausen). From the Chinese gardens Mr. Fortune introduced it to English gardens, in 1846, and it proves to be a very beautiful species, the handsomest of all the Fumeworts; it is, moreover, believed to be quite hardy, though, from its scarcity, this has not yet, as far as we know, been fully tested.

Mr. Fortune tells us that its Chinese name is *Hong-pak-Moutan Wah*, or, the "red and white Moutan flower." "The Chinese botanists," he adds, "do not take the characters of their genera from the flowers, as we do, but from the general habits and appearances of the plants. In this instance the leaves are not unlike those of the Moutan pæony; the flowers are red and white; and hence the Chinese call it the "red and white Moutan flower."

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The plant is an herbaceous perennial, growing from a foot and a half to two feet in height, and furnished, at intervals, along the stem, with leaves of a compoundly ternate character, a good deal resembling —though smaller—those of some kinds of pæonies. Towards the top of the stems are thrown out three or four axillary racemes of flowers, and these assume a gracefully drooping aspect, the flowers all depending from the lower side; these racemes are from four to six inches, or more, in length. The individual blossoms are fully an inch in length, and nearly three quarters of an inch wide, and consist of two saccate petals, of a charmingly delicate rose colour, between which intervene two narrow ones, which are white with a purple tip, and project beyond the others.

Mr. Fortune speaks of this species as being exceedingly fitted to be used as a pot-plant in rooms, on account of its extremely graceful habit, and from its blooms remaining fresh for a long time. He states that he has, in Chusan, had it for three weeks standing upon his table, after it had been dug up out of the garden, during all which time it retained its freshness and beauty. We now find that it proves one of the prettiest border flowers, dying down in the autumn, but coming up stronger in the spring, and that its colour when bloomed in the open air, is far more brilliant than it is flowered under glass or in any kind of confinement.

THE PLEASURE OF GARDENING.

How many thousand persons who have retired from the turmoil of business, derive their principal comfort and recreation from gardening? How many owe the enjoyment of good health, under Providence, to the air and exercise they take in their various garden operations? How many thousand mechanics, who are many hours a-day breathing the pestilential atmosphere of manufactories, fly to their little gardens, and find rest in the "change of work," that in their case is indeed "a holiday?" We might go on asking questions of this nature to fill a volume, and all the answers would favor gardening. Every one admits that gardening has charms which scarcely any other recreation possesses; but this is easily explained. It gratifies more senses than anything else. Music charms the ear, but the garden furnishes gratification to the eyes, nose, and mouth—the most delicious fruits; the most sweet and aromatic perfumes; the most beautiful flowers. Here the garden outstrips all ordinary sources of delight, and the seasons constantly change the aspect. As one thing declines, another takes its place: one series of luscious fruits, brilliant flowers and sweet perfumes gives place to another, so that neither of them palls the appetite. But there is another charm in the garden: you may enjoy in it solitude or company; you may study nature in perfection. There are a thousand degrees of excellence to be found in gardens, from the neat well-kept garden of the cottager, who has his fruit and flowers in abundance and variety, to the gorgeous establishments of

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the wealthiest of the country, which are like fairy land: there may not be two alike, but all are attractive, all possess the means of pleasing whoever sets foot within them. But, if such pleasure may be derived from merely visiting a garden, how much more satisfaction do we derive, when we see each beauty the result of our own labor, or our own direction! People may say what they please in favor of hunting, fishing, coursing, racing, shooting, and other exciting pursuits; but the quiet enjoyment of the garden far surpasses them all. There is something new every day, and presuming there be nothing on the mind to worry us, we believe no happiness is so complete and so permanent as ours, who love a garden, and work in it ourselves.

DESTRUCTION OF VERMIN.

MICE.—Arsenic between two slices of bread and butter will destroy a dozen, if there be as many, in a single night.

SNAILS AND SLUGS.—Lay cabbage-leaves about the ground, and every morning examine the under side, until there is not one to be seen. Old walls are too often harbours for slugs at the lower part, and snails higher up. Often too does the other side harbour them, and they have merely to come down to their feast. This is perplexing, for there is hardly any means of preventing them: a trough full of water at top would have the effect, but if it were not bedded in mortar, and closed on both sides, it would form an additional protection for them, and they would locate underneath it, in a space that would be altogether incredible, Lime here would only prevent them while it retained its caustic quality; and we have been a most unwilling victim to the colonies of these creatures, inhabiting a hundred yards of overgrown ivy, which sheltered them by day, and our peaches and nectarines served them for a feast at night. At length we nailed a horse-hair rope just under the top of the wall, on our own side, and it was an effectual bar to their depredations. This, however, would not stop them on the ground, as slugs would burrow under it, and defy it altogether. It will be seen from this, that unless you can stop their importation from your neighbour's grounds, your work will be endless, and almost fruitless. Your whole mind, therefore, must be set to stop their ingress from parts where you have no control, and then exterminate those already on the premises, by the means we have mentioned.

EARWIGS.—Lay lengths of bean-stalk about nine inches long on the ground and on the plant, and every morning blow them out into salt and water. It is better than pots on the top of stakes.

GREEN-FLY.—Fumigating with tobacco, where it can be done, is the most effectual. The house in which all the plants affected should be collected, must be quite filled with the smoke, and shut up close; the next morning they should be syringed with clean water with the chill taken off. When plants are out of doors, they may be syringed with tobacco water, and afterwards with plain water. Many prefer putting some kind of covering over the plant, and fumigating; but you may

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syringe a whole collection of roses in the time taken to fumigate half a dozen. Tobacco water should be of the strength that enables you to taste the weed, but not strong enough to bite the tongue.

Mealy Bug.—Soap suds, warm as milk, made with yellow soap, and a brush that will reach the corners, such as a new shaving-brush, will clean them out better than anything else; and when you have gone over the plants with it, go over them again with clean warm water.

The Scale must be removed, for it is like the shell of the tortoise; it protects them from everything but actual violence. However tedious the process, they must be scraped off with a blunt-edged piece of wood, or the thin handle of a budding knife, or a stiff brush. The use of urine and soft soap to hard-wooded plants is said to be effectual.

The Red Spider.—Occasionally steaming the house, and frequent syringing of the plants, are positive preventives; and if neglected till the pest has got fair hold of a plant, they can only be extirpated by the same means in a more violent degree. Black sulphur powdered on the leaves will destroy them where it goes; but as these enemies attack the under side, they often get overlooked, until they have seriously injured a plant.

Ants.—These are dangerous enemies when they get among plants. They sometimes form a little colony in s pot, work among the roots, form the whole ball into a kind of sponge. In such case, it is the surest remedy to stand plant in water till they are drowned; but the plant will then have to be drained, and re-potted in fresh soil.

Ants in the Ground.—If their chief haunts can be found, and there be no plants to injure, a kettle or two of boiling water will despatch a whole colony. If they are where you cannot get at them for plants, make a number of perpendicular holes with a smooth rod two or three feet deep, and they will fall in by hundreds, and cannot get up again.

Garden Worms.—These are often troublesome on lawns and gravel walks. Water with lime-water, and it brings them up to the surface; before they recover, pick them up and destroy them.—Handy Book.

NOTICES TO CORRESPONDENTS.

A. P. will find his article *verbatim* in the "Florist" for January, 1857. We do not like these attempts at hoaxing, and we have determined to pay no attention to articles or letters, unless, for our own satisfaction, we have the writer's name.

The above applies also to "W.B.," "An Apparition," "Bibo," and some others.

Cantab should consult the "Midland Florist Almanack" for operations of the month.

What has gone of Messrs. Dobson & Son? They have not paid us a visit this year, we should like to have heard something about Mr. Beck's stock, whether the Pelargonium is to be still cultivated and raised by Mr. Wiggens, or the establishment broken up.

We particularly request that articles and advertisements be sent early in the month; they may as well not come at all as come late.

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"AN OLD"——GRUMBLER!

It would be very strange indeed, if, among the many thousands of readers that see the "Midland Florist," there were not "some of all sorts;" therefore we are not surprised at falling in with one of these very knowing gentlemen, who fancies his opinion of considerable importance, and talks largely of what he and his friends think of the work, and of the various articles it contains; moreover, as a whole, he is sorry to see how the work has degenerated. If the opinion of such a simpleton were worth anything, and we did not happen to know him, the idea of a man threatening that if things were not done to suit him he and all his friends would withdraw, would be rather alarming, but as we do know him and also know he has not a friend in the world who would either follow his example or do his bidding, why we shall sleep easy notwithstanding his threats, and go on our own way. The "Midland Florist" has always prospered under threats. It lives upon the envy of a few men who have from time to time threatened all sorts of evil. At one time an editor wanted to extort a sum for his services that a proprietor would have been mad to give, and he poor man threatened to withdraw, "with all his friends," if his preposterous demand for his services were not complied with. So far as he was concerned his withdrawal took place, but his friends, as he called them, were not willing to be dragged through the dirt at his heels, and a very considerable rise in the circulation took place directly the incubus was removed. We recommend the writer who calls himself "An Old Subscriber" to study the fable of the old man, his son, and his ass. The old man took the advice of every fool as he passed. If he rode the donkey, he was cruel to let the poor boy walk; if he put the boy up behind him, he was cruel to the animal; if he put the son on alone, and walked himself, the boy was abused for letting the old man trudge the road, while the lazy young dog was indulged with a ride, until the old man found that, in trying to please everybody, he pleased nobody, and so resolved to please himself.

The "Old Subscriber" has not this time got hold of a fool who will waver in his proceeding to please him, nor does the empty and foolish threat of withdrawing with his friends disturb our calculations. We strongly recommend him to write a work for himself and "his friends," he will be sure to be pleased then. He says he feels "interest for the success of the 'Midland Florist,' and he should be sorry to be obliged to discontinue (with his friends) taking the work." We can assure him that this is a good deal more than we should be; curiosity made him take a peep to see what the new editor made of it, and he felt nettled that it was more diversified, more independent, that it had taken new ground, excluded cabbage and potato growing as being altogether unworthy of a floral work. Moreover, that the introductory number was an almanack and a calendar of operations for every month; so that the "Midland Florist" has not to be stuffed with the common operations in a garden, but the entire space dedicated to sound discussion, practical instruction, and useful information.

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"But," observes this old subscriber, "it certainly flags." Now, in all the letters we have received, and the greater number are from persons not ashamed of their names, there is not a single complaint, whereas this nameless scribbler finds fault with everything. We should not have noticed the letter had we not, in spite of his disguise, recognised the anonymous letter writer as an old offender in the line, and we take this opportunity of saying that we will not insert anything for anybody unless the writer, besides the signature he wishes to use, gives his real name and address as a token of good faith. We are fully aware of an under-current which has been the cause of our going a little out of our course, but when we know the cause, we know how to counteract it. There are persons smarting under their defeat, when they tried to prevent the work falling into able hands, and they have tried their best to injure it. The people who ought to have pushed it with all their interest have not only been lukewarm, but they have actually stopped our advertisements on their way to us. They have said they did not think the work would come out any more, and although we looked for any degree of delinquency from some men, and were quite prepared for it, we did not suspect treachery where we found it, for we had given no cause for it. However, we shall astonish the readers perhaps next month, for we do not allow ourselves to be played with. We can assure our readers that when the present proprietor entered upon the work he did not calculate on all the representations that were made. He knew he could command a much greater number of new readers than there ever had been of old ones, but he did not think that in seeking to disturb things as little as possible, he was providing the means of damaging the work, so far as old connections were concerned. However, we may assure our readers that no one had a right to throw cold water on our efforts. There was not the slightest ground for supposing that the work would not come out; it was a malicious, mendacious insinuation, for what object we cannot even dream, yet there may have been, there must have been, an object. There was another spiteful thing done; although we took every pains to get all communications as early as possible, not one reached us until the work was at press, and therefore the whole of the advertisements sent to the usual office were unavoidably omitted.

This, in some hands, would have swamped the work, but it is in better keeping; what has been intended to swamp the "Midland Florist" has caused a movement that will make it. After all this fighting as it were somebody in the dark, we ought to say that we exonerate our present publishers from any act that could injure the work, but they do not take in communications themselves, nor can they answer for their people. The communication has been cut off between the subscribers and the new proprietor, and he has to establish it again by some means, or be content with his own extensive list of new subscribers. The following letters are of another character:—

MOVE IN THE RIGHT DIRECTION.

HAVING read with much pleasure the article ("A Good Move in the Right Direction, by a Leicester Florist,") in your January number,

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throwing out a suggestion that all horticultural and floral societies might be the means of benefiting one another by your publishing the names, time of meeting, and place where held, in order that parties travelling on pleasure, or otherwise, might drop in and have a little friendly chat, and exchange ideas one with the other. This article was read to the whole of the members present at our last meeting, and we discussed the question, and came to the conclusion that you deserved the thanks of our Society for its insertion; and also to the writer of it for his capital suggestion, and empowered me, the Secretary of this Society, to write to you, giving you information of our whereabouts and time of meeting. Our Society numbers twenty-four members at present, but all staunch and true, We commenced this Society on March 1st, 1858, and so far have prospered. We pay 3d. per fortnight; 1d. goes for prizes, and the other 2d. for a dinner, which we have every six months, and we give no money prizes. All prizes are to be in something useful as relates to gardening, such as garden implements, plants, seeds, or books; and prizes only awarded on the last payment in each season, and presented on the night we have our dinner. I hope I have not become tedious in giving you so many particulars.

SAMUEL GOSLING, Secretary,

Name of Society, "The Manchester and Salford Working Men's Botanical and Horticultural Society;" place of meeting, Mr. Eckersly, Bridge Inn, Regent Road, Salford; times of meeting, every alternate Sunday evening, commencing January 20th. Flowers staged at seven o'clock, and judged at half-past seven.

ANOTHER MOVE.

I SAW a piece headed in your "Florist," "A good Move in the Right Direction." I beg to offer you one of our rules. If you will have the kindness to insert the object of our Society in your paper I should feel obliged. We have been established about two months, and we have thirty members already, and we meet on every Saturday for a discussion, and I should like to see many others take our example.

J. T. ROFE, Wandsworth.

SIR,—Having taken in the "Midland Florist" for some years, I was surprised not to have had the number for this month sent me as usual. My news agent sent to London about it, and received the answer that it was no longer published. I therefore write to ask if this is really the case. I enclose an envelope directed for the answer.

I remain, Sir,

Yours respectfully,

H. COOPER.

Morley Rectory, Feb. 18th.

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MORE OF THE AURICULA.

Last month you gave a practical article from an old work, treating generally of this favourite flower. I send you a twelve-months' lesson from a work now in the press, or rather being stereotyped, ready for printing; at the same time it may be mentioned, that it was printed many years ago at much greater length, and it has lost nothing by age. It is a calendar of management for the year.

January.—As there is danger of frost this month, and it is not desirable to get them frozen, it is necessary to keep coverings ready for use, and to cover the last thing at night, however mild it may be; but the milder the weather, the later ought they to be covered up; the morning frosts frequently come without any previous indication. If the weather be mild in the mornings and through the day, although the ground may be frozen, the plants may have air all the warmer part of the day. It must be observed too, that the plants will require watering but seldom, indeed, while there is any moisture in the soil they ought not to have any; they might, until the end of the month, be almost allowed to flag before they have it, but there must be no tampering with water; whether they have it once in a month, or once in three months, they must have enough to wet all their compost alike. As a general rule, they should have all the air that can be given, whenever the weather is sufficiently mild; but in north or east winds of any strength, they are better only tilted on the side, away from the blowing point.

February.—In this month, and early in next, the plants for blooming should be all top-dressed. The surface should be stirred with a blunt piece of wood, so as to loosen as much as you can without disturbing the fibres, and the loose stuff thrown out. The top-dressing should be rich. If you have good well-rotted poultry-dung, you may add one-fourth of it, one-fourth of cow-dung also rotted, and two-fourths, or one-half, of clean sand. These, well mixed together, make a first-rate top-dressing; but in the absence of poultry-dung, you may use two-thirds cow-dung, and one-third sand. This must be put on the top, to fill the pot to the rim; but previous to putting it on, the dead and decaying leaves must be carefully removed by pressing them, or rather tearing them downward, bearing at the same time a little sideways. When they are all filled up as proposed, they are to be returned to their frames, and have the benefit of shading for a day or two, and a gentle, but nevertheless, proper watering. The foliage as well as the soil should be watered, so that a fine rose and a light hand should imitate a gentle shower of rain; and if there happen to be a mild shower, they may have the benefit of it, for it is not to be presumed that any watering is so good as they would receive from two or three hours' gentle rain. All seedlings coming forward enough to bloom even in their small pots, should be top-dressed, as well as the regular blooming plants, for they want the stimulus which the removal of the spent earth and the substitution of good rich compost never fails to give, and they will be greatly assisted by the operation.

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MARCH,—The plants are now growing fast, and before the end of the month many trusses will be showing. Of course, any that are not already top-dressed, must be set to rights, without delay, as directed last month. Care must be taken now, that the hearts of the plants do not fill with dust or water after the pips show, for dust would stain the flowers, and wet, for any continuance, would injure the mealy powder which forms so conspicuous a portion of the surface of the bloom.

If there be any plants on which you are depending for a strong flower, and the offsets are not an object, remove, at once, any that may be growing out of the stem, by cutting them away with a sharp knife, before they have become large enough to rob the parent plants of any part of their nourishment, because, if an offset takes to healthy growth, it seriously affects the bloom any time before it is matured. If, on the other hand, you are depending on increase, and can spare the bloom, pick off all the pips, and earth up the offsets, which will cause them to grow more rapidly, and strike down roots. It must be watered enough to wet the whole body of earth, for frequent waterings are not desirable; this will sink the whole body below the edge of the pot, and a flat glass may be placed on it, when you are giving the plants air, but it must not receive the whole heat of the sun.

APRIL.—The trusses of the rising blooms must now be attended to. Those which are to be nursed for their blooms, must, as soon as they begin to open, be placed apart from each other, by tacking bits of soft moss, or lint, (the former, however, is far the better) between the foot-stalks, so as to place the pips a sufficient distance from each other to open freely without touching; and any pips that are coming deformed, or too weak to open the size of the rest, or too much advanced to keep while the others overtake them, may be removed with sharp-pointed scissors or tweezers, and great attention must be paid, that none of those which are to remain get damaged in the operation. When the colours become pretty clear in the budding pips, and they begin to open out well, those intended for exhibition should be removed to a warm sheltered spot, and be placed under hand-glasses, on a table or bench, if convenient; but if not, on a very clear spot of ground, out of the way of wind and dust. Water must be administered freely while the blooms are advancing, for they require a good deal of nourishment to give them size and colour, and character; and would be seriously checked, if allowed to want it. Care must also be taken to cover from frost. The hand-glasses ought to stand on four flower-pots reversed, and placed at the corners, of a proper height to let the edge of the glass down an inch below the edges of the pots in which the plants are; but in windy weather, it will be necessary to cover mats on the windy side, and the sun must be kept off, by as light a cloth or calico as can be had, for light is of great service in bringing out the colours. The examination of the plants blooming for show, should be frequent, because the blooms arranged one day, may, by their growth, displace some of the moss, and they will require very frequent adjustment, for by means of the moss, properly attended to, the flowers will be grown into their proper position, and want no dressing on the day of show, but merely removing the moss.

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MAY.—The treatment should in all respects be similar to last month, for the greater part of April, and more than half of May, gives us blooming specimens in every stage, from just opening to the perfect flower; but as some of the early ones will have gone off bloom, you may place them in a frame by themselves in a shady situation, and allow them to receive a moderate share of genial rain, but cover them against violent storms. Those who intend saving seed should remove half-a-dozen choice varieties, whose properties they wish to amalgamate, and place them under a hand-glass, supported by pots a few inches from the ground. The plants to select should be one season potted, and they should be taken before the pips are forward enough to be fertilized. As soon as they show well enough to enable us to distinguish perfect from imperfect pips, those most perfect in each truss should be selected for seed, and the remainder be picked off. The number of pips to leave on, may be determined by the quality; if there are two or three equally good, two or three may be retained; if there be one better than the rest, that one alone should be kept. These plants must be refreshed with water, and may be uncovered, to receive the benefit of a mild shower, but the glass should be placed over them at night. Some would take the trouble to fertilize them artificially, but this is a matter of fancy. To do this the anthers must be removed, before they burst, from the one to be impregnated, and then, with a camel's hair brush, take the powder from some fine pip of the sort whose properties are required to be imparted to the seedlings, and take it to the plant to be seeded. If the pistil be in a condition to receive the pollen, it will take it from the camel's hair pencil or brush freely. The depriving of the plants of some of their buds will increase the strength of those left, and augment the chances of producing good seed; and, confining the selected plants to those with some good property, and fertilizing with others of known other good properties, will afford reasonable hope of saving a little seed of first-rate quality, and producing plants of desirable properties.

JUNE.—The plants, as they have done blooming, may be placed in a frame, in a shady situation, as before directed; and as no seed may be required from the general collection, the whole of the pips may be picked off, but the stem ought not to be broken; they must be watered occasionally, or be allowed to have rain, and be uncovered altogether, except in stormy weather, and especially when the wind is boisterous. They may suffer from too much wet; but if the bottom of the frame is impervious to water, and will allow it to run off, there will be little danger. Continue putting into the shady frames all plants as they go out of flower.

JULY.—The practice of last month, in every particular that it will apply, is to be continued without any exception. Seed that is ripening may be picked and put in the sun to dry, in such boxes or drawers as will prevent any from escaping; and those who like autumn sowing may sow half their stock.

AUGUST.—This month we propose to re-pot the general collection, and we advise one prevailing rule, to disturb as little as possible the balls of earth of all those that have been one year potted in the smaller

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flowering-pots; remove the offsets as as carefully as possible, and preserve the roots of the old plants from injury, as much as you can. The surface of the balls may be rubbed off a little, so that the fibres are not bruised or broken, and the loose crocks at the bottom may be taken away; but the next sized pot must be supplied with crocks, and sufficient compost in them to raise the ball to the surface. Compost must then be filled in between the ball and the pot, and pressed between, without moving or displacing the root. If, on turning out any of these balls, the roots do not appear to have grown much round the sides, they may be replaced in their own pot, and allowed to go over another season in the same, but if the plant be not healthy, you may conclude there is something wrong at the root, and therefore you should shake out all the soil, and examine it, as directed with regard to new plants. The plants that have been bloomed the second year, and have been one season in thirty-two sized pots, may be shaken out and deprived of some of their roots; and the best way to do this is, to shorten the main centre, or carrot-like portion, with the fibres attached to it; they must be then carefully re-potted, in the same sized pot, if strong, and if not strong, in a forty-eight sized pot; but mostly these plants from the large sized pots are strong, and although deprived of their lower roots, want room; besides which, the present potting of them will do for two seasons, if they are healthy. Look well to the watering of seedlings, pricking out, potting, or shifting all that require it; let them be returned to their shady frames, watered, to settle the earth about their roots, and closed up altogether for two or three days, after which they may have air as usual, and be protected from heavy rain, but except against violent or too much rain, they may be wholly uncovered. The offsets taken off during all the potting operations must be placed round the edges of pots, to strike root, or if rooted, potted off into small pots about the size which the plants warrant; very small ones, even if rooted, may be planted three or four in a pot, and stronger ones should have pots to themselves; but there is always danger of suffering for want of water if plants are kept in very small pots, so that many prefer keeping them round the edges, three or four in a pot, to giving them small pots to themselves; and if a man be so situate as not to be able to attend very often to them, they will do better in the larger body of earth. All this work should be done before the month is out.

SEPTEMBER.—Towards the end of this month have the frames removed to their winter places, well washed out and dried, and in these frames place your stock; from this time begin to be more sparing of water, and consider them liable to frost. The proceedings with regard to seedlings may be continued as before in all respects in which they are applicable, except the transplanting those from the seed-pan to pots, in which they are to be one inch apart; they must be kept from the external air a few days, to get them somewhat established before they are treated like older plants, but seed pans should be protected from the slightest frost; and after the first part of this month they should not be removed.

OCTOBER.—A continuance of last month's treatment must be now observed, save and except, that there is still more danger of frost as

approach the winter; and, therefore, preparation must be made for covering in case of necessity. Water must be avoided, except when absolutely necessary; as the less they have the better, until they really want it. In mild weather, the glasses are best off altogether; but dry parching winds, and hot sun, (both of which are frequent in October), will be always kept better off by covering and shading.

NOVEMBER.—This month may be considered winter, so far as the management of this flower is concerned; plenty of air in mild weather, tilted lights, and light shading on bright warm days. Give no more water than is necessary to keep the earth from actually drying; and take particular care that seedlings and seed-pans are not permitted to be dry or distressed for moisture, as from the very small hold they have of the soil, the very surface drying would be fatal to their health and strength, if not to their existence. The frames must not be allowed to accumulate dirt, or falling leaves. Choose mild days to remove the pots out; and well brush out the frames, and the floor of them; for dirt and dead leaves will always be damp, and that is the greatest enemy the plant can have. In open weather, then, mind to uncover the frame, and when the sun is not too hot, let all the plants have the benefit of it. Cover from rains, and in every other respect let the directions for previous months be a general guide.

DECEMBER.—This month, like one or two preceding, and January and February which follow, must be subject to the treatment most seasonable; for in this country different seasons change the nature of these three or four winter-months sufficiently to make them change places with each other so far as the weather is concerned. It would be useless here to recapitulate the precautions we have given; and the winter-months' treatment is but a series of precautions.

A FEW OF THE MOST USEFUL AURICULAS.

WE hardly think an indiscriminate collection of auriculas would be worth cultivating, and although there may be a good many varieties tolerated even among exhibitors, we should soon get through a list of the flowers which we, if we had to begin auricula growing, should purchase. Making all due allowance for the great desire to exhibit large flowers, we look naturally first to the best pair that could be shown in competition, and no one will venture to dispute that Page's Champion and Grime's Privateer have been shown as fine as any in the kingdom.

PAGE'S CHAMPION is the brightest of all auriculas, and has the great merit of occasionally combining more good points than any, although, perhaps, hardly any one point so good as, or like. The green edge is beautiful and clear. The crimson, brown ground, is well defined, the proportions of color excellent, and stands out foremost in a collection, at whatever distance you may be, but it is a most difficult variety to produce perfect: it is seldom flat enough. It frequently shows a crack in the paste, and the paste is by no means first-rate. Still it is to be had in grand style, if you grow enough of them to pick from, and

is, when sown, good pips all well kept together, a remarkably striking, green-edged variety.

GRIME'S PRIVATEER.—This is a noble grey-edged flower, with the best black ground in existence, and to say the truth, grey-edged flowers want a striking ground color to form a good contrast. This flower, like many others of the class, is apt to come crumpled, and the top pip is always set with a longer foot stalk than the rest, and consequently stands further out, so as to spoil the uniformity of the truss. The old exhibitors would double this down, and tuck it among the lower trusses; but if there are seven pips to be left, it is far better to take it right away at an early period, for it is generally forwarder than the rest, and when they come out to their full size the top one is nearly dead; it is apt to come coarse when large. The paste is rough, but well covered, the proportion of color pretty good, but it often looks starry; still an effort should be made to get it as a companion for Page's Champion. The guard leaves are noble, and form a fine background to the truss.

LEE'S COLONEL TAGHI.—A flower which it is difficult to get to a good truss, and which never was plentiful; though it has been many years in cultivation, the scarcity does a good deal towards keeping it at a price far beyond its value as a show flower, and it is not one we should care much about, unless we had it much cheaper than we have yet seen it. The individual pips are very pretty and well proportioned, and the flower looks very pretty on a stage—but in its best state it is in no wise commanding.

BOOTH'S FREEDOM.—A striking, indeed, a beautifully marked flower, the colors, edges, eye, and tube good, and in good order, nothing can beat a single pip; but the footstalks are so short that the individual pips cannot be displayed, but nearly always lap over each other. It is one of a class of flowers that show well in the country, because they are content with five pips, whereas we require seven. There is no number that forms so good a truss as seven, because they make a perfect circle—one in the centre and six round it, all edge to edge; but it is impossible to overlook the black ground, the fine green edge, and the beautiful circular divisions, without regretting that it has not finer ground leaves and longer footstalks.

FLETCHER'S NE PLUS ULTRA.—A grey-edged flower of enormous size, fine grey, fine dark ground color, and occasionally nice proportions; but there is really but one flower that can be shown with it as to size. One of this variety, with seven good pips such as we have seen, could not be beaten by any grey-edged flower, if size be reckoned as a point at all, for we have seen it equal in all other respects to many favorites. The plant, stem, flowers, and general proportions, place it in a larger family than the principal varieties, and its only proper companion is

WATERHOUSE'S CONQUEROR OF EUROPE, equally large in every respect, but coarse, and frequently deficient of ground colour. This variety as well as the last, is a great favourite in the north, where they show in class as well as in pairs, as they call them. This should be grown in collections, but it would rarely come in for exhibitions where the finer taste prevails.

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OLIVER'S LOVELY ANN.—A variety that was little cared for until the first Metropolitan Auricular Show in 1832 or 1833, when the raiser, who had a great number of plants, showed it in tolerable order. Its great fault is a want of ground colour, and we have seen a score in bloom without one being showable, but it has some good qualities. It lasts a long time in perfection of bloom, that is to say without fading, and there are some growers who can bring plenty of colour into it; generally speaking, a flower looks miserably poor if the green or grey edge is wider than the ground colour, but this variety has one useful quality; occasionally it comes a complete green, instead of a grey edge, and then it is that the ground colour is mostly in good proportion.

HODGE'S BRITANNICA is a very pretty grey-edged variety, and the ground colour is inclined to lilac. The flowers open very flat, but there is great difficulty in getting seven pips at all alike in size or proportions of colour. If the two or three leading pips are well marked and a good size, the others are gradually worse till it is a hundred chances to one that the ground colour of some breaks right through the edge, and in the eyes of a good judge disqualifies the truss. When it has a large number of pips, and they are reduced by cutting out the smallest and latest, it may be made a tolerable show flower, but it is generally only a stage variety, however beautiful.

TAYLOR'S GLORY.—A white edged variety, and the best among them; the leaves are white, the truss large, the proportions of black and white good, the pips noble and plenty of them, the ground leaves good, and as a white-edged flower nothing at present comes near it. The pips are apt to be crumpled, and it is necessary to grow half-a-dozen, to come moderately sure to exhibition. We care not for any other white-edged flower because they all fall so very short of qualities.

STRETCHER'S ALEXANDER.—This flower is very pretty and occasionally striking. The pips open very flat, the edge is not, however, the smoothest of the class, which is green edged, and there is a fault that often precludes its exhibition. The green of the first opened pips turns pale, or conspicuously fades generally before the others are in perfection. Perhaps another fault may be noticed, the pips are frequently of very different sizes, and the colours, or rather the proportions of colours, not at all alike; but there are exceptions, and we have had this flower equal to almost anything now and then.

DICKSON'S PRINCE ALBERT.—A neat, circular flower of moderately good qualities, paste fine, and ground crimson brown. The principal fault is a paler shade on the ground colour near the edges of the divisions; this is at times more conspicuous than at others. It is generally a hard opener, and the younger pips should be cut out early that the strength may be thrown into the others. The proportions of colour, edge paste, and tube, are perhaps as good in this as in any flower in cultivation. It is mostly a grey edged variety, but is frequently so clear a green as to come within the green edges class.

SMITH'S BRITANNICA.—A very rich flower, ground colour violet, and in good proportions. Paste very fine, but starry instead of round, foot stalks too short to show off the truss well. It is a very lovely

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stage flower, but rarely any use in London or near it for exhibition, for the pips are always crowded, and cannot be expanded to touch edge to edge, on account of the shortness of the foot stalk, but lap over one another.

KENYON'S RINGLEADER.—A good deal the colour of Privateer, and more difficult to bring up in fine order. The proportions of colour are pretty good in general, and when fine matches with the Champion as a substitute for Privateer in general appearance and contrast, but is not equal to it in quality generally.

HEADLY'S STAPLEFORD HERO.—If the pip of this flower were round it would indeed be a gem. The paste is beautifully clear, the ground colour dark and well proportioned all round alike, and the well grown plant gives a noble truss, but we have no flower perfect. The very best has some condemning fault, and this should be grown as plentifully as some of the old varieties to make sure of a plant for show.

SYKES' COMPLETE now and then deserves its title. It has a good sound pip and a dark ground colour well proportioned; the truss blooms best under pretty nearly, but not quite, close hard glass, in a sheltered corner, and deeply shaded, for it is a hard opener from the great thickness of the petal. It is not often shown near London, being a late bloomer.

WARREN'S BLUCHER is a neat trusser, a striking flower, small, but showy, and good as one of a collection, but it ought not to win, because it is at best poor, as compared with the better show flowers.

MOOR'S JUBILEE.—A flower we should not have valued, but that we saw it mentioned among winning flowers at the country shows of last year. The pips are monstrous, but the truss awkward, the stem weak, and the flowers but few. It is seldom grown but in collections where if a flower will not stand alone, they do not mind helping it with a support. It is a green edged variety, with dark ground color.

GABLE'S WELLINGTON.—One of the most striking of black ground flowers, trusses famously, and may be seen a long way off, because the contrast with its grey edge and black ground is remarkable; but as a show flower it is easily beaten. The color is so starry as to throw it sadly in the back ground. It wonderfully assists among a collection on a stage, but for properties it is sadly deficient.

LIGHTBODY'S CANDIDATE.—A flower that may be useful at shows where it is plentiful enough to grow in considerable numbers. A bold trusser, a good paste, plenty of color, but sometimes too much of it; nevertheless, if we grow as many of it as we do of others that we find difficult enough to get fine, it would often come in.

SMITH'S WATERLOO.—An uncertain, hard opener, fine green edge, good dark color, excelleut truss, and stands well; but it is a difficult variety to bring to a show; when it can be got nearly open, which it can in favourable seasons, few things can beat it for general properties, but it often remains cupped on the pips until the bloom dies.

LANCASHIRE HERO.—A variety almost discarded round London, although like a prize among a good many blanks, it may be caught now and then; a running bloom. The truss has been known to com-

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prize from twenty-four to thirty pips, but in such case it ought to be reduced as soon as the pips can be removed without damaging the remaining ones. The great fault, for it almost prevents it from being cultivated. in small collections, is the want of ground colour. We have frequently seen it form a mere faint circle next the paste, and all the rest of the petal a bad grey, yet it has been a reigning favourite in its time, and some profess to bring as much ground colour as they want. Considering the difficulty of producing it in a good state for show, we should never grow it, although many dealers recommend it strongly on account of its great truss. It is now completely superseded by flowers in the same way.

CORKUP'S ECLIPSE.—A variety which we should grow, although it has one or two of the worst faults it can possess, but it has also one or two beauties. It is as flat as a shilling, the colour a rich blue purple, and a good truss. The faults are starry outline, monstrous large sickly pale tube, and no thrum; thus it has a balance of good and evil which almost exclude it from modern exhibitions, although we have seen it win over and over again with Privateer for its companion in a pair. The properties of flowers have so refined the tastes of many judges that varieties with such manifest blemishes are unscrupulously thrown out, however well they are cultivated. This is as it should be, but Corkrup's Eclipse should nevertheless always be one of a small collection. Yours.

T.

We are so bent on bringing this beautiful flower into cultivation, that we hope our readers will follow up this subject by describing all they know of the modern ones worth cultivating.

HINTS TO SEED BUYERS.

FOR the benefit of our readers who know old things by their old names, we would just inform them that the seed-shops have a different language in which to do business to that which they had in our younger days. For instance—

Monkshood is called	Aconitum.
Rose Campion	Agrostemma.
Pimpernel	Anagallis.
Snap Dragon	Atirrhinum.
Columbine	Aquilegia.
Prickly Poppy	Argemone.
Swallow Wort	Asclepias.
Hawkweed	Borkhausia.
Cape Marigold	Calendula.
Marigold	Tagetes.
Indian Shot	Canna indica.
Cockscomb	Celosia.
Wallflower	Cheiranthus.
Jacobæa	Senecio.
Catchflower	Silene.

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Egg Plant	Solanum.
Feather Grass	Stipa.
Nasturtium	Tropæolum majus.
Thorn Apple	Datura.
Gourd	Cucurbita.
Broom	Cytisus.
Larkspur	Delphinium.
Pink	Dianthus.
Foxglove	Digitalis.
Everlasting Sunflower	Elichrysum.
Hedge Mustard	Erysimum.
Horn Poppy	Glaucium.
Globe Amaranthus	Gomphrena.
Cotton	Gossypium.
Sunflower	Helianthus,
Candy Tuft	Iberis.
Touch-me-not	Impatiens,
Sweet Pea	Lathyrus odoratus.
Virginia Stock	Malcomia.
Stocks (Ten-week)	Mathiola annua.
Marvel of Peru	Mirabilis.
Tobacco	Nicotiana.
Poppy	Papaver.
Winter Cherry	Physalis.
Persicaria	Polygonum.
Purslane	Portulaca.
Cinquefoil	Potentilla.
Venus' Looking-glass	Prismatocarpus.
Mignonette	Reseda.
Pulma Christi	Ricinus.
Stone Crop	Sedum.

Now these things having, with a few more, been familiar as household words to everybody who had a rod of ground to sow once a-year, it is quite necessary our unlearned readers should be made acquainted with the names by which the same things are now represented on the packets sold at the shops. We may buy twenty-four kinds of seeds, comprising all the most popular, and yet miss the mignonette, sweet peas, stocks, candy tuft, cockscomb, egg plant, and not dream that we have them in Reseda, Lathyrus, Mathiola, Iberis, Celosia, and Solanum. The great effort to bring everything under its botanical name is a kind of affectation not popular. Thousands even now only know these flowers by their old names, and consequently feel altogether puzzled when they receive papers of seed that they never heard of. We have seen persons of the middle class, well educated in English, and moving in good society, but who never dreamed that Aquilegia was columbine, that Cheiranthus was the wallflower, or that Tropæolum majus was the common nasturtium. To botanical people this may seem all very strange; and to thousands of liberal jog-trotting solid tradesmen the botanical names appear quite as strange; so that they should never appear without the English ones annexed.

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GLASS EDGINGS FOR FLOWER BEDS.

THE cheapness and durability of glass suggests its application to many purposes for which it has hitherto been too expensive, and among other subjects to which it would be well applied, garden ornaments are not the least important. There is but one objection to its application to a thousand things, and that is, the fragile nature of the material; yet the cheapness of it will enable the manufacturer to apply it in such quantity, that sufficient strength may be given to it for almost any purposes. The edgings of flower borders, for instance, could be made with great facility in a variety of patterns, and they be so contrived as to be easily placed round the beds in circular or square, or any other form, by making the pattern not too large, and each separate piece under a foot in length of pattern. By these short lengths, or even shorter, any figure can be made without difficulty, and the mode of fixing them could be by spikes of its own material. These ornaments could be cast in moulds, and supplied at a cheap rate, and a neat design is all that would be required. It would not be desirable to cast them in great lengths, because the chances of breaking would be increased, and in case of break a longer portion would be damaged. On every account, then, we recommend the short single ornaments, of at most a foot in length. It is easier to manage any figure; they are less liable to damage, and when spoiled, cost less. In geometrical gardens they should be still narrower, because the figures of the beds are more contracted and even a foot length of pattern would be found unmanageable. With regard to color, they need hardly be any other than that of wine bottles; for scarcely any color would be more in keeping with the beds and their contents. The efficacy of these glass edgings, and their superiority over the best edging that could be grown, will be manifest, because, once made, they remain in the same state for an age; in fact, until they are disturbed; and their advantage over wood, or any painted material is obvious, as they are not affected by weather or wear. They would always look bright and clean under any circumstances. Upon the whole, then, we can hardly imagine a subject more likely to be worth the attention of glass-casters; for a little fancy exercised in the pattern would at once render the material and its general application popular.

HORTICULTURAL SHOWS.

EXHIBITORS should know what they are going to show for—that is, whether for skill, for beauty, or for rarity; because, unless they know this, we shall find one collection rare, but not showy; another collection showy, but not rare; and a third remarkable for the good growth of difficult plants. All this perplexes a judge much. One would give rarity the preference; another would be taken by the brilliance; while a third, looking to the encouragement of horticultural skill, would give it to the gardener who had shown most merit in the growth

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of difficult plants. All this is calculated to confuse the judges and disappoint the exhibitor, because they naturally all look for the head prize. The circulars to exhibitors should therefore point out what are the properties looked upon most favourably, and what they are to expect. There should be no mistake about the qualities required by the society; there is a good deal to do before this can be accomplished, and we are of opinion that no plan has approached the right one so nearly as the Royal Society's plan of 1838. The idea of rewarding *all that deserve it in the way they deserve it*, is a good one: it does away with competition. The plan of making first, second, and third prizes, should be abandoned: it leads to endless comparisons and squabbles; it generates much jealousy; it causes prizes to be given where they are not deserved; and in consequence, men, who only obtain what they have fairly won, begin comparing their case with the less deserving. It is impossible honestly to withhold prizes which are to be given to the best, if any are shown, without acting dishonourably; and when prizes are unconditionally given to the best, it may happen that very unworthy subjects take them. The Horticultural Society have a saving clause, by which they can withhold any prize without assigning a reason. This is objectionable. The best plan is that of giving prizes for everything deserving, no matter how many competitors, and to give no prize whatever if the production be either *bad*, or *merely common-place*. It leads at once to this desirable result: men who know their productions are only middling good will not run the risk of bringing them, and thus all that is shown is fine. A man then knows that it is no use taking things upon the chance of there being no other competitor. The great mischief at present is, that among a great mass of plants so very few are above the average, and it must be pretty clear that the idea of rewarding gardeners or amateurs for things of common growth is downright bad: people who merely want to make a show of common things could get nurserymen to supply plants at less price than the prizes for such a quality would amount to; so that things of ordinary growth should, *under no circumstances, be entitled to prizes;* then those things of extraordinary growth, which are, in fact, the only attraction at a show, would be better encouraged.

CROSSING THE AURICULA.

I BEG most respectfully to inform W. W. (not his usual initials) that all the plants of auricula crossed with the polen of a scarlet polyanthus, died in infancy. Mark!—no *lies* told here. No; this I never do. However, on a further trial, I have obtained about a dozen of fine healthy plants, and so forward, by all appearance will bloom next May or in autumn, and on which, if spared, I will report, previous to troubling you, by inserting a *diagram* of a seedling flower which never saw the light. I may state all possess, as yet, the auricula foliage—no change in this. I am proud to see my old friend, Mr. Hammond, has opened his granaries and commenced selling out his long-hoarded

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treasures. May health be granted him to continue his labours. Mr. Hepworth has sold pretty freely, and may he continue to keep open store and loudly proclaim the truth, fearing no man.

JOHN CUNNINGHAM.

BETTER LATE THAN NEVER.

The following were the winners at the Manor House, Hackney, Chrysanthemum Show:—

CLASS 1, Six Plants.—1st, Mr. A. Forsyth (a silver cup), Nurseryman, Shacklewell. 2nd, Mr. Hook, Stamford Hill. 3rd, Mr. George, Stamford Hill.

CLASS 2, Three Plants.—1st, Mr. E. West, Hackney Road. 2nd, Mr. Goodenough, Stamford Hill.

CLASS 3, Six Pompons.—1st, Mr. Wiggins (a silver cup), Gr. to Beck, Esq., Isleworth. 2nd, Mr. Butcher, Upper Clapton. 3rd, Mr. James, Rochester Castle. 4th, Mr. A. Forsyth, Shacklewell.

CLASS 4, Single Specimen.—1st, Mr. Hook. 2nd, Mr. Forsyth. 3rd, Mr. George.

CLASS 5, Single Specimen, Pompon.—1st, Mr. Wiggins. 2nd, Mr. Goodenough.

CLASS 6, 24 Blooms.—1st, Mr. D. Monk, Upper Clapton. 2nd, Mr. C. Wortley, Stoke Newington. 3rd, Mr. James. 4th, Mr. George.

CLASS 7, 12 Blooms.—1st, Mr. Wilkinson (a silver cup), Nurseryman, Bow. 2nd, Mr. James. 3rd, S. Monks. 4th, Mr. Wortley. 5th, Mr. George.

CLASS 8, 6 Blooms.—1st, Mr. James. 2nd, D. Monk. 3rd, E. Sanderson. 4th, Mr. Wortley.

CLASS 9, 6 Blooms.—1st, Mr. George. 2nd, S. Monk. 3rd, Mr. Cornwell. 4th, Mr. Forsyth, 5th, Mr. Butt.

CLASS 10, 6 Blooms, Anemones.—1st, Mr. James, 2nd, D. Monk.

CLASS 11—6 Blooms, Maiden Class.—1st, Mr. Allen (a set of silver tea spooons) Upper Clapton). 2nd, Mr. Slade, Kingsland. 3rd. Mr. Hodson. 4th, Mr. Hardwick. 5th, Mr. Mophen.

CLASS 12, 12 Blooms Anemone Pompons.—1st, Mr. James. 2nd, Mr. Wortley.

CLASS 13, 12 Bunches of Pompons. — 1st, Mr. James. 2nd Mr. George.

CLASS 14, 6 Blooms Refleged.—1st, Mr. James. 2nd, Mr. George.

We have had so many letters of inquiry as to the winners of Prizes at the original Chrysanthemum Society's Show, that we have given them, late as it is. The whim of the late proprietor in giving a double number in November and none in December disarranged several matters, but we shall get square in time. Those who have been used to see gardening for the month in the "Florist," year after year, will now find all they require in the "Midland Florist Almanack," published in January as a preliminary number of the work.

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TULIPS OUT OF GROUND A YEAR.

In reference to an article that appeared in one of the late numbers of the "Midland Florist," I would beg leave to state that, six years ago, a friend of mine, who had collected upwards of two hundred sorts of tulips, all at once lost conceit, and resolved to sell the whole stock. He mentioned a very low price to me, and I soon found a purchaser.

My friend brought me two hundred sorts. I took them to the buyer and got the money. Both parties were well pleased. The seller was convinced that he should have had more sorts, for he could not get his book and numbers to agree. He made what he thought a diligent search, but found none at the time. About Midsummer he came upon sixty sorts; they were all sprung and very soft, and not likely to do much good, but he thought that I might give them a trial. I kept them in a cool place until the beginning of October, when I stripped them. I cleaned and planted them in the ordinary way. Almost all of them had made bulbs; some of them were very small. I think that about the third part of the sorts showed bloom. Five or six of the shorts never came above ground: they were very small when planted.

I may state that, about forty years ago, a Birmingham correspondent sent me a fine root of Washington in the beginning of April. Although immediately planted, it never showed foliage, but when lifted I got a fine little bulb, which soon gave me plenty of Washingtons.

Wm. Meldrum.

MR. PRESIDENT KNIGHT'S NOTIONS OF THE RED SPIDER.

"The red spider is one of the most formidable enemies with which the gardener has to contend, and against which he is least well prepared with the means of defence. His peach and nectarine trees upon the open wall are often considerably injured by it; and the conservatory, the forcing frame, and the stove, scarcely present a plant which is not subject to suffer from its attacks. When it appears upon trees growing upon walls in the open air, and wherever water can be abundantly applied without material injury to the plants, it is easily destroyed; but there are, I believe, comparatively few plants which are not much injured by having the lower surfaces of the leaves much wetted. The aversion of the red spider to sulphur, or its inability to live in the close vicinity of that substance, has long been known to gardeners, and the object of this communication is only to point out a more efficient mode of employing it than has, I believe, hitherto been practised. The instrument which I use bears a very close resemblance to those employed in fumigating with tobacco, but it is filled with pieces of the wing feathers of pigeons or poultry, amongst wh ch a small quantity of flour of sulphur is dispersed. The receptacle is

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then closed with a lid, the front surface of which is perforated with many small holes, through which the air, impelled by the bellows, passes, carrying with it a portion of flour of sulphur. By shaking the bellows, the feathers are made to change their positions, by which many successive portions of flour of sulphur are made to escape, till the whole which the receptacle contains is expended. I first employed this instrument in the last summer in my melon-house, in which, upon some of my plants, I observed a large number of red spiders. After using it, I noticed, with a lens, in the web, an immensity of minute particles of sulphur in company with a very large number of red spiders; but upon examining my plants three days afterwards, I found the particles of sulphur alone remained, and that the red spiders had either died or marched off. I found no difficulty in causing many minute particles of sulphur to adhere to the under surface of the leaves of all my plants; and during the remainder of the summer I was not able to find a single red spider upon them. The form of the instrument for melon plants growing in hot-beds requires to be considerably altered; and the perforations for permitting the escape of the flour of sulphur should be lateral instead of being in the front of the lid; that should be made slightly conic, and of less width than the receptacle, so as to come within it to a small depth, by which means the whole of the flour of sulphur that escapes will be impelled forwards. The apertures should be confined to one side of the lid, which should not sink wholly into the receptacle; and through such apertures the flour of sulphur will be made to escape below the level of the leaves of the melon in the common frames, and so dispersed over the under surface of the leaves. I applied flour of sulphur in several other cases, in the last summer, and always with success, and I am applying it to my peach-house and vinery, instead of water from an engine, and I have reason to believe with perfect success. Mr. Williams, of Pitmaston, has perfectly succeeded in banishing the red spider from his melon-house by causing sulphur to evaporate from the hottest part of his flues; but his melons, though very large, and apparently perfect, are generally much surpassed in richness and flavour (perhaps not the same sort). When sulphur is made to evaporate, some uncombined acid flies off, and this Mr. Williams suspects to operate injuriously upon the health of his plants. It seems probable that the same uncombined acid would cause the flour of sulphur to operate injuriously; but though it has often been applied in large quantities, no one has witnessed any ill effects."

The short and long of Mr. Knight's rambling paper (of which we have only given extracts) only brings us more perfectly to the knowledge that what was recommended not quite half a century ago, and gardeners practised with great success, was an easier mode of destroying the enemy. Make a paint of lime, sulphur, and water, as thick as milk, and paint over the flues or iron pipes. But preventions are better than cures. Heat and moisture will always keep these mischief-making customers away. It is only

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when plants are checked in their growth by cold or drought that the red spider attacks: they never trouble healthy subjects. Many use a fumigating bellows to make tobacco smoke, and put a little sulphur among it with good effect; but there is much more credit due to the gardener who keeps the insect plagues away than to those who drive them away.

SHADE OF ABERCROMBIE.

THE ROSE OF JERICHO.

AT the beginning of the year 1848, Dr. D'Avoine, President of the Society of Medical and Natural Science of Malines, published a memoir of John Storms, a learned professor of the ancient University of Louvain, who was born at Malines, in the year 1559, and died in 1650; and who wrote a monography of the *anastatica hierochuntina*, Jericho. Dr. D'Avoine was far from aticipating that an illustration by Sir William Hooker of the anastatica would appear in England a few months afterwards, giving an excellent figure of the fresh plant, and another of the dried plant, with all the details of its structure, In the remarks of Sir William Hooker, on the Rose of Jericho, there is no mention made of the eminent labours of John Storms; neither of the writings of Professor Kickx, who had already exhumed from oblivion the monograph of 1607 (the time when the work of John Storms appeared): nor is there any notice taken of those of Dr. D'Anvoine. Lonicera calls it *Amonum rosa sanctæ Mariæ;* but Linnæus, Jacquin, Aiton, De Candolle, Sprengel, and indeed all botanists call it, *Anastatica hierochuntina*, or Jerusalem anastatica. Sir W. Hooker does not seem to recollect other synonymes; neither is he disposed to speak of the sacred quality of the plant, nor of the superstitious veneration which is shown for it among the ignorant people in the country where it grows spontaneously. Commelin first called it *Rosa hierochuntina*, Dalechamp *Rose of Jericho;* latterly these names have been given to two other hygrometric plants, both different from the two roses, viz., to *Lycopodium lepidophyllum*, a South Mexican plant, and to the capsules of a certain mesembryanthemum from South Africa. "The Rose of Jericho," continues Sir W. Hooker, "is as much a rose as it is a cabbage. It is a humble and insignificant plant in appearance, but it has long since attracted the attention of travellers in the east by its hygrometrical properties. The old annual stem, being preserved, rolls itself up in the dry weather or season. It then rises out of the sands in the hurricanes of the deserts of Syria and Egypt, and floats in the wind If it rains, the branches revert to their natural position; and again, when the weather becomes dry, it curls up and contracts. This property lasts for years: all kinds of fables have been cherished about it, and it has acquired a considerable reputation among the people. This vegetable is nevertheless, rarely cultivated, and it is only propagated from seed. It is thus that it is in the collection of Kew." In regard to the locality of the Rose of Jericho, M. D'Avoine has cited

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the passage of Eloy, and in our turn we cannot do better than quote it; it is as exact as the original:—"The pretended Rose of Jericho," says Eloy, in his *Dictionnarie Historique de la Médecine Ancienne et Moderne*, "is a sort of Thlaspi that grows in the deserts of Arabia; it is not a rose, and there is none of it to be found round Jericho. During the time that this plant is still in vigour in the ground, it appears in the form of a bouquet; but in proportion as it dries (itself), its branches interlace each other, and the extremities fold inwards, meeting or joining at a common centre, forming a kind of little globe, which the quack doctors make the people believe will only open at Chistmas. Storms does not state that he cultivated this plant, but it certain that he had seen it in a living state. His only mistake is having classed it with the voilets, to which it has no relation. I may also add, that in the herbarium of the brother Wynhouts, formed at the abbey of Dilighem, in 1633, the anastatica was included among the culinary plants grown in the garden belonging to the abbey. For some years the catalogues of disposable seeds of the different botanic gardens of Europe have contained *anastatica hierochuntina*, and in the borders of most of these establishments the plant may be seen in its living state, grown among the cruciferous kinds. Seeing that the most remarkable property of this plant is its hygroscopicity, and that this disposition to imbibe the aqueous fluid of the atmosphere lengthens the internal side of the branches only, it is, we think somewhat singular that no phytologist has ever dissected the stalks and demonstrated the cause of this effect. The Rose of Jericho is but seldom found among our dealers in curiosities; at the present day it has become still more rare; and it is useless to consider our anastaticas, cultivated in the manner of a tigneous Rose of Jericho, as answering the description of those originally brought from the east. Under our sky the stem do not assume a woody character—*Prop Morren in Ghent Annales.*"

RUSSELIA JUNCEA.

This is one of the most graceful plants in the stove, but one very likely to attract the mealy bug, if once suffered to be checked materially, or to stand still too long when properly at rest. It is a long, grasssy, weeping plant, ugly if grown too vigorously, for there will sometimes be shoots so ramping as to seem unnatural. It is a plant which should never rest long until it is a specimen and well-flowered. Use for its culture half turfy peat, and half loam from rotted turves: this, well chopped up together, but not sifted other than through a sieve that would let a bullet through, will be found quite adequate to its vigorous growth. In a small pot, put a rooted cutting, insert it in such a pot, with a small glass over it, and plunge it in the tan for the sake of bottom heat. When it has struck root, and the root has reached the side of the pot, give it a pot one size larger, with the same kind of soil, but let one third of the height be filled with broken pot for draining. Let it now have a moist heat, and if the stove is kept too dry, have a glass over it, but it will do no good without a moist heat long together; keep it still in gentle bottom heat, you will find

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the shoots begin to move pretty fast, on which top any one that is growing too fast, and if any remarkably vigorous shoot come up, as will frequently be the case, stop it at once; the great beauty of this plant consists in the shoots growing numerous but rather weakly, and hanging over the side of the pot, which must be elevated as the branches lengthen. Some cultivators support the plant up to a certain height, and then let it grow over and hang down towards the pot, and it will even hang below it then; but the plant is more likely to get unhealthy when tied up to supports than when it takes its natural course, and grows at once over the edge of the pot. As fast as the roots reach the side of the pot, it must have a shift into the one it is to bloom in—say a nine-inch pot. As soon as it is shifted into this, there may be several very strong shoots come up much thicker than any other about the plant, and these must be shortened at once, that they may throw out lateral branches; the shoots should be placed equally round the pot, and any that grow strong enough to stand upright, should be topped before they advance much: the plant will very soon assume its natural habit, and droop round the sides, becoming thicker and thicker, that is, more and more numerous. If there be a disposition to send forth a few straggling blooms here and there, pick them off immediately; let it be syringed occasionally, and continued in moist heat until it has grown as much as it will, and begins to slacken, when it will go at once to flower, and bear abundant scarlet or coral blooms about the size of the common barberry, all along the graceful long pendant branches, which will hang a yard down if well grown. The propagation of this is very simple: any one of the joints of a shoot will strike root, but in a plant of any size there are many side shoots at the bottom that would come off with roots to them. Many who support the plant with rings and sticks as it advances, continue to change the pot from size to size until it comes to the largest, but those who allow the plant to grow at once over the edge of the pot cannot do this, for after one or two shifts it is very difficult to keep the plant out of the way of damage, so that it is necessary to place it in the large blooming-pot at the end of two or three shifts; while it is blooming there is a complete stop to its growth. It makes a great show for a long time, and there are many successive flowers, but when the bloom is over, the plant is a good deal distressed, and although by thinning out, cutting back, and re-potting in new soil, it may grow vigorously again, it is better to keep a constant succesession of plants to come in after one another. It is the fashion to grow it in rich compost, and to produce very large and handsomely grown plants, but they are more shy of blooming, and rarely prove well-flowered specimens at any considerable age. Plants may be excited too much, and we have seen this too often in the case of stove and greenhouse specimens.

BARGAINS IN PLANTS AND SEEDS.

THAT there is a good deal of humbug in the London seed trade cannot be denied, but it is as notorious that the public have, in a great measure, been the cause of it, and their indiscriminate love of

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quantity for money has brought it all upon themselves. The thirst for low prices has caused a most unwholesome competition. A scamp sets up for cheap selling, advertizes retail seeds at less than he must pay wholesale to procure them himself. Common sense tells us that there are only two ways to do this: one by adulteration, the other by cheating his creditors. He must cheat somebody: either those he buys of, or those he sells to, must be taken in. Yet such is the rage for cheap things that thousands encourage the cheap seller. The fair tradesmen see the ground slipping away from under their feet; they must either meet the public or lose their business. If none but sensible persons purchased seeds it would be no trouble to show them that they were duped by the cheap sellers, but it is not so; a vast majority do not know a good seed from a bad one, and nobody but the raiser can know the sort, that is, the particular variety, nor whether it be true or otherwise. The most respectable houses, where every precaution is used, are occasionally deceived. They may know the sample is good and in good condition but although every seed may grow, they may be far from true to the sort they buy it for; in which case it is worthless, and every ounce they sell injures their trade. The best seedsmen send their own seeds to be grown by regular seed-growers, and pay them so much per quarter, or bushel, or ton, as the case may be, for all they can produce from that seed. There are seed-growers who, judging what will pay them best, will grow on their own account; but having established a reputation and a connection, they have no difficulty in finding a market among those who know them. But of what use is seed that can only be bought at a full price to compete with the cheap shops? It is to be regretted that in an article which tells no tales as to its quality for months, the public should be so careless. Every man who has a shilling to spend should have the moral courage to deal with first-rate houses, and be content to pay a first-rate price for a first-rate article, because he is completely at the mercy of the seller, who has many ways of cheating him if disposed to do so. One mode of imposing on the public is to adulterate the article by means of dead seeds, and this has often been done to the extent of 75 per cent. Another mode is to serve them with an article of which the growth is unknown, and which for want of a character, will bring no price in the market among creditable buyers. It is, therefore, bought to mix with good seed, or to be retailed at a cheap rate. There is nothing more absurd than buying cheap things for a garden. Thousands of bulbs are sold at the marts under the hammer of rigging auctioneers; and yet, failure in the bloom year after year will not cure silly people from buying. In seeds a man is not only robbed of the cost, but he loses his ground, his crops, and his season. People can be found who will sell a hundred packets of flower-seeds for a crown; but would a man who has a character to lose or a connection to preserve, or whose time is worth anything, do so? No; and yet there are persons weak enough to buy the rubbish, because it is cheap. We know we are handling a ticklish subject, and that in this, as in many cases, we may offend people who might do us good. Our hope is, that truth, however ugly, will ultimately prevail; and

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that if we offend one by telling unpleasant facts, we may gratify ten by opening their eyes to the tricks which are played, and save them from being duped. Good seeds are of such importance, and the cost so small, that we cannot and never could account for the prevailing disposition to look at the price. Let us consider for a moment that a family wish to provide a crop of cabbages, the difference between the very highest and the very lowest price could not be three pence, and when the crop comes it may not be worth the price paid for the seed, and it may be all that can be required. "Penny wise and pound foolish" is a saying often applied to those who run after cheap things, but in no case does it come with such force as in garden matters. If a man buy what he can see, he may be taken in a little, and pay a small penalty for running after bargains; but in seeds a man is buying a future crop of something that may be good or good-for-nothing; and if the latter, he will have lost all his time and room as well as his money. We, therefore, strongly advise the public to avoid cheap things in all garden matters. Avoid all auctions but those on a man's premises, where there is a tangible reason for selling, and a chance of fair buying. We do not mean a sale where a man once a year pretends his ground is wanted for building, and has a sale with reserve upon every lot worth having. How often have we seen sales on the same premises, and the ground, after it was over, about one-third cleared. The best thing the public can do, if plants are wanted, is to go to a respectable nursery, buy only what is wanted, and of the size it is wanted. Avoid auctions altogether; leave them to the trade, who, if they can buy worth their while, purchase, and if not, let things alone. A gentleman may be sure that if he does get a bargain, to all appearance, there is something which the trade discover, and which he does not, and that nine times in ten such bargains are dear.

GLASS WALLS.

We gave, years ago, our opinion on these absurdities, which will prove and have already proved costly, troublesome, and ineffective; and having said this when they were first introdued, we have waited as we did in the case of Hoare's Vine Towers for their patrons to prove the justice of our condemnation; but so few people adopt this last costly folly, and so many are invited, that we are constantly applied to for our opinion by those who have not seen it, but who are half-tempted to try it, by the names of the respectable nurserymen advertized as agents. Be it so; try a few rods of glass wall, which, if they have not seen the models, nor the realities, may be described as a narrow greenhouse, with a glass back as well as front, well adapted to burn in summer-time, freeze in winter, and occupy a few extra hands all the year at window cleaning; for when they begin to get dirty, they are the most slovenly-looking contrivances in in a garden; as they are seen through, every stain on the glass is conspicuous, and we may easily fancy the extent of labour which is

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absolutely necessary to render them tolerable when we calculate the number of square feet of surface that has to be polished now and then. If the wall be 8 feet high, 100 feet long, and has only a two-foot roof there will not be less than 3,400 square feet of surface to wet, dry, and rub bright every time they are cleaned. We will not go into the particulars as to the culture of wall-trees, or the proposed iron framework within; it is a waste of space and of the time of the reader, whom we will leave to fancy himself in the pinched-up space between the trees, and the glass knocking off the buds, the blooms, or the fruit, as the case may be, while he polishes off the 3,400 feet of dirty windows to every six-rod length of wall. We treat the thing as one of those contrivances by which people who have more money than brains are constantly dragged into expenses much to the annoyance of their gardeners, if they have good ones, upon whom a vast amount of responsibility and trouble is imposed. Glass walls are only adapted for those gentlemen who are fond of new things, for they will soon be discarded when they are adopted, and make room for some other toy.—G.

SHOWING FLOWERS IN CLASSES.

Every effort to establish class-showing in London, has hitherto failed. Those who have room and means to grow a considerable number, oppose it, because it places the man of limited powers on a level with them. There is something cruelly selfish in all this, and it discourages small cultivators. If a man with a moderate garden can grow but one dahlia in each class, he may produce individual flowers as fine as the growers of thousands, although numbers certainly afford a greater choice; but although the small cultivator, by paying attention, may grow a few in good style, how can he produce a stand or collection? Apart, however, from this disposition for stand-showing being selfish, the effect on the progress of floriculture is bad. In class-showing there is no puzzling of judges with a mixture of good and bad blooms; the single flowers standing against each other, for comparison, fare according to their individual merits; whereas, comparing a collection of twenty-four, or twelve, or even six, of which not two are of the same quality in either stand, is a task which not one in a hundred can perform satisfactorily. Again, class-showing decides the comparative value of a variety. The best in any class, if there be a good competition, is proclaimed: and although it may happen occasionally that, for want of flowers of the best varieties, a second-best wins, we are all informed, in the long run, pretty nearly what is good; and by the flowers that any one variety beats, we may estimate its value. As a test for seedlings, it is the very best that can be adopted; for if a novelty beats the best flowers we have, it must, except under peculiar circumstances, be better in quality or properties than the sorts that it beats, and these peculiar circumstances arise only when the other specimens are not so well grown. We do hope, however, that those who wish to give the growers of all grades a chance, and to sim-

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plify the honest valuation of new varieties, will advocate class-showing in everything, whether carnation, picotee, dahlia, tulip, pink, or any other flower; class-showing must tend to its advancement. The change must open the public eyes in their choice of the best kinds to grow. If the stand-showing is to continue, let us have class-showing as well, for it is anything but beneficial to the science to shut out the most humble florists from the chance of competing, and thus banish some of the best flowers from our tables.

GROWING PLANTS FOR HOME DECORATION AND FOR EXIBITION.

THE great difference between these two occupations will hardly be anticipated. There was always an opposite mode of treatment required in many particulars, but the system of showing has become so widely opposed to judicious management at home, that gardening for "the home" and the "foreign department," as we may call it, effect us like two different sciences. The necessary preparation for transmission from one place to another, and constant jumbling about, has converted all our natural plants to artificial ones. Not one production in a hundred is shown in its natural form. We can excuse this when we remember that plants have to be taken for miles, jumbling up hill and down dale, over rough roads and stone streets, before they get to their destination, and then have to be got into these vans and brought home again, the same day or night, as the case may be; for if the branches were in their natural state, playing freely in the air, they would be frayed to destruction by the mere action of rubbing against each other. But we must own, at the same time, that a plant with every branch and bloom constrained in its place, and bound mechanically to some formal support, is no more fit to compare with one fairly grown and unconstrained, than an artificial plant would be with a real one. It is to the ambition of growers to produce enormous plants, that we trace the great change that has taken place in public exhibitions. There is as much difference in a plant grown properly, and standing undisturbed in its place at home, and one grown artificially in an iron cage, as it were, and all the branches and blooms bent about so to come to the outside surface, as there is between the sham flower and the real one; and he who for one moment gives himself the trouble to think of the formal, stiff, and unnatural shape of the plants at a show, and the beautiful free growth of the specimens in a private collection, or a nursery where there is no showing, will not hesitate to pronounce those at a show altogether spoiled for the lovers of plants. Nevertheless, those at a show form masses of flowers, which in some measure compensate for multitudes of wooden legs and iron bird-cages, but it is a sad perversion of the gardener's skill, and a complete disguise to the habit of the plant. It is a treat now to go into a private garden where the men are forbidden to grow for exhibition, and plants are in their natural form.

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DESTRUCTION OF VERMIN.

THE gardener's enemies are not to be numbered; they are like the dust of the roads or the sands of the sea; his whole work is destroyed in a short time by a hundred different means, if he be not on the alert at the proper time to prevent or avoid the mischief. His cabbages and cauliflowers may be eaten into holes and rendered worthless on the eve of perfection by caterpillars, or they may be destroyed at the onset by club at the root; his peas may be stolen by the mice before they are above ground, or taken by the birds when at maturity; his roses may be blighted by the green fly; his onions spoiled by the maggot; a tree of ripe cherries may be cleared in a morning by a few rooks or blackbirds; his grapes, peaches, and nectarines disfigured by wasps; his plants in the houses may be cut up by the bug, the scale, the thrip, the green-fly, and red spider. Turn which way he will, there are thousands of his foes ready to commence their ravages the instant he neglects for a day or two any single department of his business, and he has no small difficulty in pursuing his ordinary duties at times when some one or more of these pests threaten destruction to his choice productions, and he is obliged to turn aside to use those remedies which experience has taught him will soonest rid him of their presence. Nor is it sufficient to use any temporary means; his life, all the summer season, is a life of watchfulness; there is no duty so constant, no attention so unremitting as the gardener's, and if he neglect but an hour, he feels the effects for an age. If his weeds be neglected awhile, they drop their seeds, and he has work cut out for the next year, and among his numerous enemies in this respect, he may reckon a careless neighbour, or a road-side ditch his worst, for they will sow seeds all over his ground in spite of his care. But our present object is to consider the best means of getting rid of those pests of animated nature, which spoil, and often altogether devour and destroy his crops—earwigs, woodlice, ants, snails, slugs, wireworm, grubs, living creatures without end, any of which, left alone for a time, prove endless plagues. Among the most useful implements to aid him in his crusade, we reckon the syringe, the frequent use of which is of immense benefit; for it is one of the greatest disturbers of insects, whether on fruit-trees out of doors or potted plants under glass. The timely use of the syringe washes them off, and by perseverance will go a long way towards preventing the incalculable mischief that is done by the green-fly that infests all tender shoots of fast-growing plants. How commonly do we see a rose-tree clean and free from any living pest, and the next day actually covered with the *aphides!* and if they are allowed to remain, how soon do they suck the juices from the tender stems and kill the buds that are on them! We know of no remedy for these prolific gentry but tobacco, or the Gishurst compound. Out of doors, these, with water, will kill them; in-doors, smoking them in the frames by the fumigating Pastile or tobacco will cut short their career. Some adopt a paper or calico covering for any favourite tree or bush, and fumigate them underneath

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it; for if we can but fill the cap or covering with the smoke, which always rises, and keep it full for a few minutes, the flies will all die, and may be immediately washed off with the syringe. We need not say, when fumigating under glass, the house or pit should be closed so that none can escape, and it is as well to do it in the evening, that it may be closed all night. You will see the dead flies by wholesale lying on the pots or hanging about the leaves, but not a living one among the whole number, however much they abounded before fumigation. For the red spider a damp moist heat and syringing will do something; but it is a good plan to put sulphur and lime on the flues or hot-water pipes, mixing them with water and painting with it; the sulphurous vapour that arises settles the account with this pest very quickly; but plants must be watched for this, because if the leaf actually shows the attack by the colour, they have already sustained considerable damage, and by looking often at the under side of those leaves, which are susceptible of attack, a straggling spider or two may be seen that would become the founder of a colony not so easily routed. Frequently washing the walls of stoves with lime-white, in which a little flour of brimstone has been mixed, is an excellent thing to prevent the red spider, and if a plant has it very bad, it must be discarded from the house, or all the rest will become infected. The mealy bug is one of the foulest-looking insects that ever got hold of a plant, and so difficult is it to get rid of, that houses once troubled with them can hardly be cleared by any known means. To clear a plant of it, a good tub-full of tobacco-water should be prepared, strong enough to enable you to taste it,—in fact, about the strength of weak tea. By putting two bars across the top of the tub, and inverting the pot, with its rims resting on the bars, the entire plant will be immersed in the tobacco-water, and in twenty minutes or half an hour the whole will be killed; but if the plant be too large for this, it must be washed with tobacco-water and a hand-brush, like a shaving-brush, and this must be performed very carefully or the young shoots will be damaged. Many stove plants are subject to this, and a foul plant put among fifty clean ones, and neglected, will give it to them all. Whether in a very young state they blow about like so much down, and locate wherever they alight, or not, we can hardly tell, but they propagate very fast somehow, and if a foul plant be at one end, some of the cleanest at the other end will soon have them. In fact, this and the red spider are formidable plagues in the stoves and forcing-houses, and if neglected, the plants suffer rapidly. The bug will locate on the most tender shoots and bloom buds, and so get among the tender flower-stems, that ixoras, clerodendrons, and other plants blooming in bunches will not be able to flower at all, unless the bugs be eradicated before they have time to do mischief. Another mode of getting rid of these creatures is to wash all the infested parts with yellow soap-suds, and a new shaving-brush has always appeared to us to be the best adapted for the purpose. The bristles are just stiff enough to drive them out, and they cannot stand soap if they are disturbed; but even syringing will scarcely move them when they have once taken full possession of all the corners and interstices of a plant. Care must be

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taken that the suds are not too strong nor too hot, but they are the more effectual for being a little warm. We need hardly say that the plants must be handled very carefully, for it is easy to bruise and damage the young shoots and bloom-buds with rough handling, and in this respect it is impossible to be too tender. The hand must support the leaves and young shoots, which should lie in it, or lean against it, while the other hand plies the brush. By this means the stalks of the leaves are not bent nor broken. Some lukewarm water should be handy at the time to clean away the soap, or, which is better, to syringe the plant with after it is cleared of the bug. The scale infests hard-wooded plants, generally, more than anything succulent in its nature, and this scale has to be removed with some gentle violence, for it adheres generally pretty close, and all the syringing the plant could have would not stir it. A stiff brush and warm soap-suds may; but it will frequently be found necessary to scrape it off; some gardeners, as a preventive to this, mix up a wash of clay, thick enough to dry on a thin coating, and it has been found that the scale cannot settle or breed on this; but it has its disadvantages. In the first place, it does not help the appearance of the plant; in the next, it is questionable whether the ordinary organs of the plant can work so freely, when there is a close coating of any kind over the surface; but when a plant has had the scale badly, it may not be amiss to give it a wash of this sort to remain on a few days, while there is a chance of any of the young brood hanging about, and then to syringe it off by degrees, for it will be some time before it is all washed off. Ants are very awkward things in a house; for they will, if in any quantity, often make their colony in a pot, which they work into a thousand hollow ways all among the roots, and the plant is almost destroyed before the mischief is discovered. Generally, the best way of thinning these intruders is to coax them into one spot, and pour boiling water on them, or to wet their places of rendezvous with strong lime-water; or lay a few hollow bones about, if they frequent parts where this hot-water and lime-water cannot be used, and, having a pail of boiling water handy, throw these bones into it quickly, and thus destroy hundreds at a time. These may be dried again and placed as before, or in any place where they most abound. Where these industrious little creatures can fairly locate themselves, it requires a good deal of perseverance to dislodge them. Of course by pursuing any of these methods earnestly, their numbers lessen very much, and when you find but few, stir the tan or soil, or whatever they harbour in, to disturb them still more, and by this means you will finally dislodge them all, or render them so scarce as to be of no importance. The wood-louse is another ugly tenant of a house, and those among the tan can only be trapped and destroyed. One of the most effective traps is half a large potato or turnip scooped out, and put the hollow side downwards; take them quickly every morning and frequently in the day; but we might stretch this article to any length and still have some of the gardener's enemies unnoticed. Although there is a paper on the subject of the red spider exclusively, the hints contained in this are worth notice.

GEO. GLENNY.

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HINTS FOR LADY GARDENERS.

Ladies who are fond of plants and flowers, must take a few hints and treasure them in the memory, for they know they every now and then find a plant sickly and often dead. The causes are various: too much water keeps the roots always cold, colder than the atmosphere, and the plant gets chilled; and where saucers are used and the water is allowed to remain in the bottom, no air can get to the roots, and they perish with rot Too little water only gets part of the way down the ball of earth, and all below it continues dry and perishes for want of moisture; the natural consequence is, that as the plant only has the support of the upper fibres, it becomed starved, and after a vain struggle dies. Now, it is necessary to moisten the whole ball of earth alike whenever water is given; therefore, when you apply it, see that it runs through the bottom into the saucer, and pour it from that as often as any comes through till it is quite dry, and do not water it again till the soil is nearly dry again. But it is possible to water until it runs through at the bottom, and yet not moisten the earth. When the soil dries it shrinks and leaves the side of the pot, thus making a vacancy. Apply the water without pressing down the earth to close it to the side, and it will run through fast without sinking into the soil at all. Therefore, before watering always press the earth close to the side of the pot, if it be not so already, all the way round, that water when applied may only escape by going though the entire soil. The difference between winter and summer, cold weather and hot, dictates no difference in the quantity of water to give at each watering; but in winter time it is possible that watering once in two or three weeks may be often enough, while in summer time once a day may be hardly sufficient. There is but one way to water things properly, and that is, to be guided by the state of the soil. It may be dry on the top before it wants water, but it ought not to be dry half-an-inch below; and it would be well to look over plants daily in summer, though they will not require so frequent an inspection in winter Another point is worth attention: water should be given of the same temperature as the atmosphere in which the plants are growing. In summer time it is highly improper to use well-water, it is many degrees colder than the atmosphere; and if there be none but well-water, let it stand in the open air a day, or, rather, keep a tub or open pond always supplied to water from.

Air is essential to plants, and no opportunity of giving them all you can on all favourable days should be omitted. In winter time, when they are in the house, the windows should be opened as much as possible, when the weather is short of frost. Light, too, is necessary, and where plants have only a front light, they should be constantly turned, otherwise they will grow one-sided; this especially applies to plants in the windows of dwelling-houses. We are too apt to put the best side to the light and so make the opposite still worse. The rule for shifting plants from one sized pot to another should be the roots reaching the side and beginning to cross each other and form a

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surface of fibres next the pot. Now and then the ball of earth should be turned out and examined. By turning the plant downwards and tapping the edge of the pot on any steady substance, the ball will come out; therefore, one of the hands should cover as much of the surface as possible, putting the fingers on each side of the stem; the ball then comes into the hand without difficulty or force. Heavy pots cannot be managed by ladies, but a man-servant can get the ball of earth out in a ladies presence and replace it or put it in a larger one. If it be a geranium it may be sunk lower in the new pot; but if a heath or any other hard wooded plant, it must not be potted a shade lower. The soil (which is frequently bad and fatal to plants in the hands of private people) should be light and rich. The use of common garden mould, or any that first comes to hand, has caused thousands of deaths; generally it is sour and clammy, and especially when taken from London gardens. Where there are but a few plants, it is beter to buy two or three barrows full at a nursery, ready for use; but if there be many, get half a load of loam, a quarter of a load of peat turf, a quarter of a load of well decomposed dung from an old melon or cucumber bed; get a labouring man to mix them together, chopping the peat turf to make it go through a coarse cinder-sieve, and when thoroughly mixed keep it together for use. There is not a plant but will grow in this compost—although if we were growing heaths and hard-wooded plants, we should mix it with half its bulk more of peat sifted, for the plants would grow still better. Pruning of plants, as some call the regulation of the shoots, should be confined to the stopping or taking the ends off of shoots inclined to grow too long for the rest of the plant, or to push out on one side. In small plants, the pinching off the ends of shoots causes other shoots to come and makes the plants bushy. In fact the plant can be grown any shape or form by encouraging growth where you want it, and cutting or pinching back the shoots where you wish to get rid of it. The time to prune or plant into a good shape is directly it has done blooming and before it begins its new growth, because the new growth is where the bloom for the next year comes, in epacrises, camellias, acasias, hoveas, chorozemas, and many other plants. Geraniums are exceptions to general rules, for they are always growing, and those who wish to get them bushy must keep on pushing the ends off the shoots as soon as they are two inches long, until Christmas-time, and some may be continued till March. They may then be allowed to go up to bloom, when there will be a truss or bunch at the end of every shoot.

ROSES IN BEDS.

Many of the most beautiful hybrid China roses are not sufficiently hardy to stand a hard winter, and are cut off by the frost if subjected to the open airs without assistance. There are, however, various modes of preserving them. "Glenny's Garden Almanack" describes an ingenious and rather an effective mode of accomplishing this, and at

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the same time, preserving a neat appearance. He plants the dwarf, and constantly blooming kinds; he prepares the bed by securing eighteen inches in depth of good turfy loam and dung from a cucumber frame, in equal quantity, and mixed well, filling the bed to that thickness after gently pressing. planting the roses a foot apart all over, and profusely watering them; then he takes large rough white flint, placing them close together all over the bed, pressing them a little into the soil that they may be firm in their places, but leaving room for the roses, which must not be bruised; he then places moss very carefully into the interstices, and especially round the plants. They bloom profusely all the summer, and a good way into the winter, if it be mild. There needs no further protection from the frost, only keep them down to the moss, and in early spring they grow again and flower still more profusely than they did the first season of planting. Another mode of doing this is to place upright stakes in the ground as high as the tops of the roses, and throw mats over them at night, which are not removed in the day if the first continue. Where roses are in long narrow beds, hoops and mats may be easily placed and removed. Standard roses of the tender kinds may be saved by packing moss between the branches of the head, and tying them over with cloth or matting: the stem, being perfectly hardy, needs no protection, though we have seen them tied round with hay-bands, and the heads neglected. But in the colder parts of France, the standards are dug up and placed in an out-house with their roots in soil, and are then planted out again in spring.

ODDS AND ENDS FROM VARIOUS SOURCES.

BY A CORRESPONDENT AT HULL.

Preserving Green Peas.—1. If shelled and put into a dry bottle and corked perfectly tight (sealed) they may be kept until winter with ease. They should be cooked as soon as the bottle is opened, as they they will not keep well after the air comes to them.—"New Genesee Farmer."—2. *Russian Method.*—Shell, scald, and dry them; put them on tins or earthen dishes in a cool oven, to harden; and keep them in paper bags hung up in the kitchen. When required for use, let them lie an hour in water, set them on the fire in cold water, with a bit of butter and a sprig of mint, and let them boil until ready for table.—3. Gather peas (varieties which are green when ripe) when fit for the table, lay them to dry in the pods over the hot-house flues, or on any place where they can have a continual gentle warmth. When perfectly dry, put them away in a dry drawer till wanted, and whether it be at Christmas, or the following spring, if steeped in cold water for twenty-four, thirty, or thirty-six hours before boiling, they will be found excellent.

To Kill Slugs—1. Make small holes an inch deep, and the diameter of the little finger, round the plants they infest. Into these holes the slugs will retreat during the day, and they may be killed there by dropping in a little salt, quick-lime in powder, or strong lime and

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water.—2. Lay cabbage leaves on the ground, and every morning they be found congregated on the under sides. So long as there are any to congregate, brush them off into salt and water or lime-water.

On Preserving Apples.—The fruit, when picked from the trees, is carfully placed in casks, with alternate layers of perfectly dry sand; this entirely excluded the air, and absorbed the moisture emanating from them.

To Stop the Bleeding of Vines.—To five parts of scraped cheese, add one part of calcined oyster shells, and press the composition strongly into the pores of the wood. The sap will instantly cease to flow, and the largest branch may be taken off, at any season, with perfect safety; or burn the place with a red hot iron.

Wash for Fruit Trees.—Soft soap, 2lbs.; flour of sulphur, 2 lbs.; leaf or roll tobacco, 2 lbs.; nux vomica, 4 oz.; turpentine, 1 gill. To be boiled in eight gallons of soft or beer water till boiled to six. It is to be used milk-warm in the spring before the blossom buds begin to expand. The wash may be applied with a brush, but a syringe is the most effectual method.

Solution for Potted Plants.—Half an ounce of sulphate of ammonia in a gallon of water makes a solution that produces a most extraordinary effect on plants in pots; every sixth watering is to be made with this, and the other five with pure water—rain or river water is the best.—*Gardeners' Gazette.*

Fleas in Dogs.—To four ounces of fox-glove leaves (Digitalis) pour two quarts of boiling water, and with this, when it has become cold, wash the dog.

To Remove Frost from Vegetables.—They should be placed in cold water for several hours previous to their being dressed, and allowed to thaw gradually.

To Preserve Rose Leaves.—Gather them without any of the green and hard parts, when they are full blown and perfectly dry. Spread them on a sheet thinly, in an empty chamber, where the sun does not shine, but where they are thoroughly ventilated. Stir them frequently till they are quite dry. They are then fit to put by.

To Preserve Moss Green.—Wash it clean, and set it in the shade out of the sun and out of the wind to dry; and when it is dry, then dip it in spirits of wine, and lay it up in papers, and it will keep good for twenty years.

To Destroy Flies.—Half a spoonful of ground black pepper, one teaspoonful of brown sugar, and a table spoonful of cream, mixed well together, and placed in a plate, will attract and destroy flies, without any danger of poisoning children.

NOTICES TO READERS AND CORRESPONDENTS.

TULIP SHOWS and several Articles, in type, in our next.
W.W. "The Handy Book on Gardening," 1*s.*: Houlston & Wright.
A. and all others answered by Post.

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GARDEN ORNAMENTS.

We have more than once spoken of the importance of garden ornaments, but more particularly of vases, which may be furnished from time to time, with such a diversity of plants as to make them almost a new feature as often as we please. One may be dressed with brilliant scarlet, another with blue, others with white, a fourth with rose, and so on through endless varieties of colour. But to do this effectively and rapidly, we never plant out; insert pots, with moss between them to keep them in their places, and the same material to cover the edges of the pots they are growing in. We may be told by gardeners that this is too much trouble; that they like to fill the vase with proper soil and turn the plants out of their pots, so that the plants may grow freely, and last all the season. We know all that as well as they do; but if they tell us that it will be always as perfect as they can be kept with potted plants, we shall be apt to dispute it. Besides, the charm of potted plants lies in this, if any one is a defaulter, we can replace it. If we desire to change all from red to blue, or white, or any other colour, it is only a few minutes' work. We never need have a leaf or a bloom untidy. We may mix the colours as we please, and thus give

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a variety from week to week. If we have any very choice subject in bloom, we can show it off in the centre of one of the vases, and surround it with appropriate plants or flowers. In short, there are many advantages in depending on potted plants, and but one drawback—a little extra trouble. Nevertheless, we believe we must appeal to the ladies before we get it generally adopted. If we can once bring their attention to the subject, their taste will decide the matter; for inasmuch as ornamental vases are generally near the house, they are immediately under the eye of the mistress, and we never met one yet who was not fond of flowers, fond of order, fond of variety, more than all, a good judge of colour and contrast.

Next we come to the subject of the vases themselves. Our illustration is only one of a hundred different shapes, and as to the material, there is now hardly any limit to the texture, the colour, or the fabric. Terra cotta, clay, iron, porcelain, plaster, stone of various colours, marbles of all shades, and if we look to old specimens we find Time has been their enemy—fine carvings almost defaced, inscriptions lost, the surface decomposed. Our atmosphere seems to spare nothing, even the Houses of Parliament, not yet finished—and perhaps never will be—does not escape the corroding nature of our changeable climate. He who can invent something to resist it will be a benefactor to the arts and sciences. Many have tried their hand at it, but, so far as we have yet been able to learn, Mr. Ransom's silicious stone is the nearest to perfection. We are not going into "the reason why," because it would involve us in a very long scientific description of its manufacture; but those parties most competent to judge pronounce in its favour, and, so far as we have seen articles made of it, there is every appearance of stability. But the most important part of Mr. Ransom's discovery is, that by saturating the surface of every kind of stone, from marble down to common cement, with two solutions, he can convert it to an imperishable material as deeply as the liquid sinks. Every kind of covering has been tried in vain. Paint, besides filling up and destroying the sharpness of all carving, is of itself perishable, and therefore must be renewed; and every renewal adds to the mischief. Besides, if a thing be painted, it may as well be wood, or any other common material, as the finest statuary; for the painted surface is all that can be seen, whereas Ransom's Silicate sinks into the material, and forms no cover whatever. It insinuates itself into the material, filling up the pores with fluid, as it were, and converting soft Portland into imperishable, indestructible stone. Tombstones and monuments, in rapid progress of decay, can thus be preserved from any further damage. Ornaments of every description in stone, or compo statues, house fronts, balustrades, in short, everything in the nature of stone or cement, can be preserved by a double washing of the silicate. With regard to the subjects manufactured of the silicious stone, they comprise everything that can be carved in stone or cast in iron, all that builders require of the useful and ornamental, from the ornamental chimney-pot to the hall flooring, so that to attempt a description would be useless. Such vases as we have given by way of illustration will be as cheap in silicious stone as in any less durable material. Many vases

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have been cast in iron, the only material, perhaps, that can equal it in cheapness; but as iron must be painted often to keep it from rusting, every coat takes off the sharpness we admire, and, that gone, there ends its claim to beauty. We have ourselves vases made of the silicious stone, and we can compare it to nothing so well as an imaginary marble granite. We have also furnished others with it where we have had to improve a garden; and we find it is approved by others, for its rich and delicate appearance, as contrasted with other compositions.—*Gardeners' Gazette.*

LAYING OUT FLOWER GARDENS.

One of the best contrivances by which the gardener can simplify his work in planning a fancy garden, and afterwards transfer it to the ground, is that of using ruled paper for the design. Let the paper be ruled in small squares with the ordinary faint lines. These squares may be eights of inches, which may represent feet or yards on his ground, and it will be obvious in an instant, that he can, by measurement alone, transfer any figure with the greatest nicety, whether the design be geometrical or otherwise. In this way engravers transfer drawings or paintings from the largest to the smallest size, and *vice versa*. He will merely place or pin threads across the larger or smaller objects from which he is to copy, and thus divide it into squares; he will then divide his canvas or paper into the same number of squares by faint lines, and he can thus see nearly enough even to preserve the likeness of a portrait where every line is to be placed; so also in the garden, he may, with a garden line for small plots, divide his ground into so many squares as will make his yards or feet correspond with the squares on his paper, and peg out the most complicated figures with the greatest accuracy. For geometrical patterns he can work without the squares, because these figures are formed with circles from a common centre, and when these circles intersect each other, he can form his straight lines with the greatest precison. In giving a gardener a plan on paper, all the marks should be left, that he may see how the figure has been obtained, because, although a good ground workman would find out a way to obtain all the forms, it would assist him wonderfully to see how the figures have been originally drawn, and what portion of the complicated figure has been adopted for beds. We need hardly to say, that the garden line enables us to strike circles on the ground as correctly as the compasses will on paper. Before we begin a figure, the ground must be trenched, levelled, raked, and rolled hard and smooth; a pointed stick will then make all the mark we want, and a number of pegs to place in the portion of figure that is to be preserved, is all we require. The marks not wanted may then be obliterated, the soil be removed from the paths, the edging for box made perfect and the laying of the box, already prepared for the operation, can scarcely go wrong. In the plans for geometrical flower gardens there is room for exercising great taste and

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invention; but, nevertheless, a good deal of choice is secured by the simplest means; a pair of compasses will, in a short time, produce the most complicated figures, by only drawing circles intersecting each other in a variety of ways, and keeping them in the same relation all round the centre. One limb of the compasses being a double pencil, our first circle would then represent a bed with a path round it; put the point of the instrument on the inner line of the path, and draw another circle, and next, put the point where the inner lines intersect five more times, and you will have formed six circles round the centre point. Choose any new points you please for another series of circles, or open the compasses wider and do the same thing on a larger scale, but from the same centre, and you will find such an infinity of forms, that you might actually make a dozen plans from the same things. Choose any sets of forms out of this figure for your beds by filling them up with black. But always taking care that the path between them be the same width. But a thousand ideas will arise out of this simple process; and by changing the width of the instrument, or drawing a few straight lines across your figure, or adopting other modes of intersecting your diagram, you will find the changes to be made in a flower garden to be as numerous as the tunes played on eight notes of music, and yet all distinguished by mathematical accuracy. This subject brings to mind a request made by a gentleman to a person always willing to assist an amateur, to be supplied with a plan for laying out a flower garden, the form and dimensions of which he supplied. In answer to enquires as to the style he required, he said he wanted a multiplicity of beds, &c.; accordingly a colored sketch was supplied, but when money was mentioned, "He had not the least idea that the party ever made a charge," but was much obliged, and would take care to let his friends know; and that is all the pay got for a service which the trade never thought of getting under a guinea, of course such a trifle was not worth enforcing, but we should feel ourselves sadly degraded under similar circumstances; every time we looked at the garden, we should think it reproached us and accused us of meanness, if not moral dishonesty.

INSTRUCTIVE ANECDOTES,

For the Garden community.

THE February number of the "Midland Florist" is a very interesting one, and the articles are of an improved character. The articles on the "Extent of the Potato Disease," and on the "Forcing of Plants, Fruits, and Flowers," bring to my mind the conversations or sights of ancient as well as of modern dates. About thirty years ago I was ordained to the Curacy of Gressage, St. Michael's, in this county (Dorset). Soon after I got there the bread riots and machine breaking raged over England. The Wiltshire rioters came into Dorset, and the last place they came to, before they were finally stopped, was my parish,

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of which the population was about 120, very quiet people. Soon after this I dined with the Chairman of Quarter Sessions, now no more. He was an old friend of my family's. After dinner one day conversation turned upon bread riots. He said, "All this cry about scarcity is groundless. The times have been better, but still the pressure arises from panic. The sellers of corn cry out 'short crop, mildew, weevils,' this is echoed from market to market till it reaches London, which governs the prices. People, who have corn to sell, 'hold hard;' a short supply goes to London, and then prices jump up to four shillings per quarter for wheat, and that day week the price rises to eight or ten shillings: hence distress arises first in London, and then all over the country." I replied, "That is true, but it is very sad." "Yes," said he, "but the clergy are to blame; they believe this story of dearth, deprecate in the pulpit the sins of the nation, petition the sovereign for a day of humiliation, pray for a blessing on the seed about to be sown, thus increasing the panic, and adding fuel to the fire."

On another occasion I was dining with him, and he asked me, "Do you keep a gardener?" I said, "No, I only care for potatoes, and the six first cabbages that are cut; when I can stand at Wimborne and smell them at Blandford I do not like them." He continued, "Gardeners are all alike, stubborn, obstinate as martyrs; they would burn rather than turn. My poor old fellow, who lived here in my service about forty years, died lately. He and I could never agree upon a 'verdict.' If I said it would be a dry day, he cried out, 'Yes, but there will be a storm before night.' If I said the hothouse fire was too hot, he let it out; and if I said it was not hot enough (which was rarely the case) he heaped on coals and singed everything. Well," said he, "we rubbed on together till he died. After his death I determined to begin *de novo*, and test the obedience of the next man that came to offer his services. So, in a little time, the servant came into the room, and said, 'A gardener is come to try for the place.' Show him in, I said, by all means. He entered the room and made a low bow, and asked for the place. I said, What do you know about gardening? He answered by saying that he was pretty well up in all the 'branches,' I said, that of course was well enough, but will you 'obey' me? 'Oh, certainly, sir,' said he, 'that is my duty.' 'When, then, can you come on,' said I? 'Directly, sir, if you wish it.' 'Then,' said I, 'let us make a beginning at once: go down into the garden, and ask the weeder to show you 'test and corporation plot,' take up all the gooseberry bushes in the garden, and plant them upside down in the said plot.' 'Well, sir,' said he, 'I certainly *could* do that, but then they would all die.' "Exactly so," said my friend, "I thought you would begin remonstrating and arguing; it is clear, that if you will not implicitly obey me in so simple a matter, you will not do so on other occasions: you 'may go' in search of another place, where implicit obedience is not one of the 'branches.'"

After the story was over we laughed heartily, and he ended by saying, "When you hire a gardener, recollect my 'gooseberry test.'"

In connection with gooseberry trees, the equally truthful, but more solemn circumstance occurred here (at Rushton) in the year 1855

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which will illustrate that masters are "sometimes" right. In that year my brother was High Sheriff, and I was his chaplain. The Assizes were held at Dorchester in March. The day before the Judges were to come, I and my brother went to sleep at Dorchester, to be ready for the Judges next morning. Before, however, I left I went down into the garden to see how things were going on. My old gardener, in the 28th year of his servitude at the Rectory, who had seen the death of two rectors and the departure of a third, and was going on with me for the fourth, was cutting the gooseberry bushes. I said, "Elias, you have a sore throat and cold, and if you stand about in this cutting easterly wind you may get inflammation of the lungs, and that will probably carry you off." "Oh," said he, "that is no odds, sir, and besides the tomtits and bullies (bullfinches) will carry off all the gooseberry buds." Again I wished him to go home and take care of himself; but, like a true gardener, he would have his own way. Well, I left him to go and witness the sentence of death passed upon the last person hung at Dorchester for the murder of her husband. The Judge was the present Sir W. Channel, then Mr. Sergeant Channel. My brother and I felt this acutely, and glad were we to quit the painful scene. On my return, however, I found my prophecy about to be fulfilled. Inflammation of the lungs had set in, venous congestion had taken place, and while I ran down the parish to summon his wife, he breathed his last.

I buried this old, faithful, and beloved pastoral servant under a lofty Chinese arbor vitæ, and placed at his head a fine piece of Portland stone, recounting the names of his masters and length of servitude, according to him the lofty eulogy written by Pope,—

"An honest man is the noblest work of God."

Then follows the 3rd chapter 25th verse of Deuteronomy, "I pray thee let me go over, and see the goodly land that is beyond Jordan; that goodly mountain, and Lebanon."

On the footstone are these words,—

"One gentle sigh his fetters broke,
We scarce could say, 'he's gone,'
Before his willing spirit took
Her mansion near the Throne."

With regard to the first anecdote, notice, "He that withholdeth corn, the people shall curse him." With regard to the second, notice, "To obey is better than sacrifice." With regard to the third, notice, "In the midst of life we are in death."

W. F. RADCLYFFE.

Rushton, Feb. 27th, 1861.

HINTS ON TRAINING GRAPE VINES.

IN training and pruning vines for out-of-door culture, after the fashion of vineyards, the treatment assimilates very much to the raspberry. Five or six canes come up, and are grown to any length they please to ramble; but they are cut back to about six-feet lengths, and supported

all round in the form of the branches of a currant-bush; all the old wood of last year cut down, and, when it breaks, the bunches are reduced to one on a shoot, which is stopped or shortened at the first joint beyond the bunch. This is the renewing system. The other way, the vine is formed as you please, and properly supported, but all the new wood shortened to a single eye. The grape-vine is, in fact, the most manageable of all exotic fruits. So that you do not allow too many branches to grow, and too many bunches to swell, it will always do well: but all cuts must be made clean, and with a sharp knife. All fastenings must be made strong. The wood must not be too crowded, and the practice of baring the grapes, by taking off the leaves of the plant, is a bad one. Grapes will ripen and color behind the leaves, and to lose the leaves injures the plant.

A vine can only do a certain quantity of work well; all beyond this distresses it, or at least weakens it. It is as requisite, therefore, to take away some of the fruit as some of the branches. Every eye that breaks well will put forth a shoot with one, two, or even three bunches of grapes: on no occasion should more than one of these three be allowed to swell. The instant the one bunch is fairly developed, the shoot on which it grows should be stopped at the joint beyond, and the shoot made fast by a piece of list, in such position that it may be sustained properly during the time of its swelling and ripening. Those who are particular about appearances, and wish the vine to be very uniformly trained, may, upon planting the young one, cut back to three or four eyes; and when they break, and commence their growth, save the best on each side to go right and left, and rub the others off. If there be any fruit, let it be picked off at once. These right and left stems, or shoots, are to be trained within a foot of the ground the whole length of the front they are to occupy, and no others are to grow. The next year these two shoots will break at every eye, and you have to rub off all but those which are wanted, which should be at equal distances the whole length of the branches, every alternate, or every third, or every fourth eye, so that they are about eighteen inches or two feet apart, and eyes breaking at the top of the branches. These may be allowed to grow, and be well supported, but with room to swell. If the vine has been well rooted, and in good soil, this second season will fill all the space required with upright branches, or serpentine branches, according to the fancy of the grower. These branches will all bear the next year; and while they bear, others will grow up between them, to ripen for the year after. In the spring, therefore, when the vine breaks, preserve one shoot between the others, to grow up for the next year's bearing, and rub off all others. By this plan new wood is grown every year. While it is growing, it is merely fastened, or rather supported, in a temporary way; but at the end of the season, when the old wood is cut away, the new wood is trained into its proper place.

[This subject was promised by the late editor, and we do not like to break faith, but we will not engage like another "Florist," to fill up the space with fruit, the only exception we make is the "GOOSEBERRY," which is cultivated for show by almost every florist in the country, and new varieties sought quite as eagerly as a floral novelty.—ED.]

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THE EDITOR TO THE READERS.

We hardly wonder at the confusion and delays, which, to us, were very annoying, when we call to mind that all letters were for some years addressed to the late Proprietor, and consider how few people take notice of the directions given in the work. Thus it was that things intended for the Editor were addressed, Sutton Brothers, Nottingham, or Alfred Sutton, London, and so forth, and hence the delays and blunders which deprived us the last two or three months of our advertisements and communications, until too late for the current number. As, however, come what may, the Printing Office is the last place of business before the numbers are issued, we have determined that all letters, orders, and advertisements, should be addressed to the Editor *at the Printers*. Upon another subject, that of early publication—we have equally resolved that we cannot answer for the insertion of any advertisement if received after the 24th of each month, nor guarantee any article received after the 20th. We are persuaded that nothing injures a work more than being too late in the market. Thus far our future is determined on. How much the addition of a new interest which will greatly strengthen the work may affect the publishing, we know not; but we have every reason to believe it will be issued from a west-end office instead of the city; but that every facility will be given at the City Printing Office. Our duties will not be interfered with, we are attached for a year, and new arrangements do not affect us. We are the link between the readers, advertisers, and owners, and it is impossible to serve one without doing good to the others. It is our pleasure to be mysterious, and to hear and see people groping in the dark to find out who and what we are; ready pens of well-known contributors are engaged, the character of the work, with, we hope, considerable improvements, will be kept up, and those who very frequently lent a helping hand in former times, will help again. The most valuable aid is that which no amount of talent can command: reports of meetings and of shows, cannot be secured without the assistance of people on the spot, and we trust every Secretary will feel it part of his duty to his society to furnish us with such reports. They are far more valuable than papers on culture, for these we have within our own reach, the others we have not, and can only hear of them through the kindness of our readers. Our object is to record all the important facts in connection with Floriculture, and proceedings of societies are among the most interesting. Accounts of new flowers produced at meetings as seen growing, are of great consequence; notices of the last year's novelties, and how they turned out, equally acceptable. These facts can arm everybody who cultivate flowers. Those who are engaged in this work, we mean the business part of printing, publishing, and finding paper, throw their whole heart and mind into it, and open the pages to the florist world, determined to give it a fair trial at any cost, for they believe it quite as able to sustain and deserve a circulation of ten thousand as three, and they only ask the readers to act upon their own convictions. If it be considered a credit to the Horticultural

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literature of the country, let them enlist all their floral friends as readers. If it be not deserving, let them repudiate it altogether. The work has had its enemies, not among florists, but among a class of scribblers whose services have been rejected, because "their writings" (as they call the articles vamped up from books), would in our little miscellany be only like the weeds in a border—a complete nuisance. These, however, have done us good by finding fault to those who never seen it, and who have been induced to buy it, and judge for themselves. Other enemies have been originally offended because they have not been allowed to make it the vehicle in which to attack opponents, but this hostility is all moonshine. The cases of these people are just as hopeless as ever. Articles for this work must not be personal, and they must be original, a honest transcript of acknowledged merit. Advertisers are earnestly reminded that there is no work that can give them so extended a notice among buyers as the "Midland Florist," but that to insure a place their favors must reach the Editor by the 24th at latest Those omitted this month are only those not with us by the 24th. It may seem a long time before publication, but there is no help for it, we must draw a line somewhere, and we have done so. The late proprietor once published the names of nearly a hundred contributors, but we watched from then till now without seeing a fourth of them acting up to the title of contributors; now we make no display of names, because we feel we shall have none the less for being quiet, and that holding out promises of literary aid from great pens, is like the showman's pictures outside his van, stirring paintings, wild monsters not to be found within, luring people into disappointment; we promise nothing beyond honest opinions, and the best article we can write or get written. Our van has no pictures outside, and those who want to know what the work contains must

"ENQUIRE WITHIN."

THE COCKSCOMB.

PROPERTIES.

THE surface of the cockscomb is the only handsome part of the plant; consequently, quantity of surface is a point. The side of the flower is the most ugly part of the plant; consequently, the less of that there is in sight the better it is. The stem of the plant is the next ugly part, and therefore the less of that there is the better. This suggests to our mind the property of the plant altogether, therefore:—

The flower-head should be half as wide as it is over; the surface should be rising globular so far as an oblong can be so.

The foliage should come up close to the flower, to hide all but the surface,

The stem should be short, and the leaves close together, reaching to the pot, so that no part of the stem should be seen, and project beyond the edge of the pot, to hide the soil and pot-rim.

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The leaves should form a ground-work, as it were, to the flower, and form a margin to it, not projecting more all round it than one-third the width the flower is from the centre to the side.

The height of the plant should be only the same as its diameter.

The bloom should not be less than twelve inches diameter; and, therefore, when measured over the crown, eighteen inches, including the rise, and the foliage three inches beyond it all round.

The colour should be decided and very bright; florits small, and close together.—*Glenny.*

CULTURE:—Sow the seed in boxes, pans, or wide-mouthed pots filled with the loam formed of rotted turves, cut thin from a rich pasture, and laid together for the purpose, mixed with one half its bulk of silver sand; unless it happens, which it will sometimes, that the loam is naturally sandy, when less sand will do. Place them in a hot-bed whose heat shall range from 75° to 85°. The seeds cannot be sown too thinly, for they ought to be an inch apart. Take care that the soil in the pans does not get thoroughly dry, or the seeds will perish. The plants will soon be up, when they will require to be shaded from the hot sun, placed pretty close up to the glass, and have a little air by lifting the glass of the frame at the back with a wedge or small stone. As soon as the plants have the third pair of leaves, they will require to be potted in the small pots, size sixty. The same soil is to be used, and the heat continued; therefore, if there is any decline indicated, let there be fresh linings of hot stable-dung to keep it up, for any serious decline would spoil them. Here they may be grown until they completely fill their pots with roots. At this stage we divide our stock; one half we place on slates, or tiles, or other hard substances, to prevent the roots protruding: the other half we have shaken completely out, according to Mr. McEvoy's plan, without breaking the fibres, and repotted in clean pots of the same size, in light, poor, sandy loam; and if not sandy, we add a third or fourth part of sand, thus checking the growth very considerably, quite as much as keeping them in the original pots but rather more suddenly. Both these, however, were submitted to the same treatment, replaced in the hot-bed, or, more generally, in a new one, and kept dry for a day or two, after which they must have water. There will be found very little, if any, difference in the growth of the two; but in a few days, when the shifted ones show their roots through the bottom of the pot, they are all to be shifted to pots, size forty-eight. The flowers now very soon appear generally, and the form of the crest and the closeness of the texture gives us a pretty good idea of the promise. Broad ones are the best to our fancy, and not those which are very long, and, like a cockscomb, thin. Those selected, are shifted to pots a size larger, say thirty-twos. This shifting must be done without disturbing the ball. I have found no remarkable difference between those starved in their first pots, and those shook out and shifted after McEvoy's plan; though, if the roots were allowed to go through the pots into the soil of the hot-bed, they would not be starved at all. This renders the tiles or slates necessary, so that if the roots protrude through the bottom of the pot, there shall be no nourishment for them.

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But in shifting from the forty-eights to the thirty-twos, we are providing for the growth of the flower, which requires better soil and more nourishment generally. The object in starving the cockscomb till it shows the flower, is this: the plant could be grown in good soil, and with plenty of room, or frequent shifting, to two feet high, before the bloom would take up the growth; but if the plant be kept starved, so as to produce the crest or incipient bloom while the plant is very small, it will happen, as in many other seed-bearing plants, when the flowers are abundant, as soon as the buds begin to swell, the plant is stayed in its growth, and the flowers, the fruit, or seed-pods take it up. Having, therefore, checked the plant, by keeping it in a small pot until the bloom appears, we may safely give it all the nourishment we can, to encourage the large growth of the flower. Let the soil, therefore, for the shifts, after the forty-eights have produced the flower-crest, be composed of the following: the loam from rotted turves which have been cut thin, as for laying down on lawns, one half; one quarter of thoroughly decomposed dung from an old melon-bed; and one-fourth sand. If loam from rotted turves cannot be had, and you have only clear loam, you must begin by adding its equal bulk of leaf, or vegetable mould, and mixing it well together; this is a fair equivalent for loam from rotted turves. The decomposed dung from an old melon-bed is generally mentioned as the best to use for potted plants, because its fermentation renders it fit for use almost at the end of the first season, and because it is generally very clean. Nor is it the worse if leaves or grass have been mixed with it, which is frequently the case: but the equivalent for this would be any clean stable-dung that has lain together till rotted into mould; we might as well, therefore, have said well-decomposed horse-dung. In all cases, therefore, when the compost for anything is described, and the identical articles cannot be had, make an equivalent as nearly as possible.

The cockscomb requires rich, light soil; that which we have described is such. The water will percolate through it without difficulty, which gives us an opportunity of applying liquid manure with advantage, because it will reach every part of the root; and this soil will retain its moisture long enough for the plant to take it up. The soil being provided, let it be well incorporated. It would be all the better if it lay together after mixing, and it should be remembered that the very best method of mixing soil after it has been turned over and incorporated, with the spade, is to run it through a very coarse sieve, not small enough in the openings to stop anything larger than a hazel nut.

Shifting:—Fill up one-fourth of the pot with crocks, and a little soil on the top of them, just enough to let the ball of soil from the former pot come even with the edge, and by a gentle pressure go a little below it; do not disturb a fibre, but put the soil all round and press it gently down, so as to fill all round between the ball and the pot solid, but not hard. And now prepare the hot-bed, so that bottom heat can be applied with advantage. There should be enough tan on the top of the dung to enable you to plunge these thirty-two-sized pots, and the heat should not be less than from 80° to 85°, and the plants be within three or four inches of the glass. They should have all the

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light; air whenever it can be given without reducing below 80°; and during the most fierce heat of the sun, a calico over the glass would be of the greatest advantage, because, without depriving the plants of light, it will keep off burning heat. As soon as the roots fill these pots, shift again to size twenty-four, going through the same process in every respect; keeping the heat up by means of new linings or otherwise, and plunging them to the rims as before. When, by trying one of the balls, you find the roots have reached the side, and you wish to continue the same pots, the equivalent for a change must be given, namely, liquid manure—half-a-peck of dung stirred two or three days into ten gallons of water, and the clear liquor poured off to use.

Dr. Saunders found one of the best liquid manures to be, half-an-ounce of sulphate of ammonia dissolved in a gallon of water, and this, used once as the roots approach, or rather reach the side, will produce immediate effect, and should not be used again until the plant has been watered six or seven times with plain water. But if the foliage of the plant more than covers the pot when the roots fill it, by all means take the next sized pot and shift again; because it encourages the growth more than any liquid manure can. Cow-dung at the rate of half-a-peck, well decomposed, to eighteen gallons of water; guano at the rate of half-an-ounce, pure, to a gallon of water—in each case to be completely dissolved, and the liquor used,—will be found, as we have seen by experiment, so equally effective, that in selecting the finest plants, we have had to take from those treated all three ways, (that is, moistened with all three washes,) and from those which had nothing but plain soft rain water. Some plants will bear shifting up to the pots size twelve, which are eleven or twelve inches across and ten inches deep, and yet keep all proportions with the pot.

Mr. McEvoy has produced them, he says, thirty-one inches and a half *along* the crest, fourteen inches and a half across the crest, only one foot high from the pot, with foliage almost enveloping the rim of the pot; and he further says, that the smallest plant in his frame (three lights) was two feet two inches along the crest. Moreover, the largest that we have mentioned, was also the tallest, although only twelve inches high.

We confess that, although we have succeeded in producing very extraordinary plants by cuttings, we took the idea from Mr. McEvoy, and therefore, instead of directing it to be done as if it were our own, we give it as his. He mentions it rather as a curiosity than as a recommendation to be followed, but we have followed it with great success.

He says, "After the crest is well formed, which it will be in a very young state, the flowering part" (that is, the upper part of the plant) "is severed at any desired length from the stem, and as no new leaves will be afterwards formed, it is desirable to remove only so many as you want."

We take four pair of leaves to grow, and therefore, while quite small, cut below the fifth pair, which we remove, and strike them in bottom heat in small pots, when they are starved into showy, thin, incipient flowers, we can select the best formed, grow and shift just as we have directed for the other plants, for they will grow as fast and as fine and infinitely more dwarf and handsome.

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IS FLORICULTURE TO REVIVE? YES!

I long to see the days of old floriculture over again near the metropolis, when old Gabel and half-a-dozen others trudged off with two auricula boxes hanging like milk pails to the two ends of a yoke. None of us thought anything of a walk to the "Greyhound," at Dulwich, to show a pair of plants, and whether the exhibition were there or at the "Britannia," in the City Road Fields, some would have to come or go a long distance. How many good companies have met at Finchley by the church, when the "Queen's Head," was an old fashioned thatched house, about one story high; but when we were burned out—that is, the house was destroyed by fire—we were dispersed, and met no more. Near all the suburbs where there were comfortable head quarters, social floral societies were not wanting, and the enthusiasm was striking. Our meeting monthly to talk about flowers gave a zest to their cultivation, and in the dense smoke of Bethnal Green and, Whitechapel, might be seen a score or more of earnest cultivators of the ranunculus, discussing their practice, and the merits of particular varieties, talking over their floral adventures as earnestly as the miser talks of his *poverty*. No matter which way the florist turned out of London, there was a head quarters of some local society for the promotion of the science and for the advancement of some florist's flower. But the great societies did incalculable mischief by diverting many growers from the small clubs to seek for higher prizes, and strange as it may seem, "The Horticultural Society" had no sooner weaned the most enthusiastic growers from their local institutions, by giving large prizes for florists' flowers, than they left their favorites out of their schedule, and put the growers all abroad. Meanwhile, the tenants of small gardens were driven out by hundreds to make room for houses, and they are now obliged to go further from London or give up growing altogether. I have long come to the conclusion that the social meetings do as much for a particular fancy as anything connected with it, and when the great societies pretended to give prizes till they drove the florists away, the social gossip which kept men together and doubled the pleasure of cultivation, was partially destroyed. A man took his flowers, set them up, was then turned out until the time for coming in again. They had not a rallying point; nobody knew where to look for his friends and acquaintances; they all had to lounge about the gardens for hours before they could remove their productions, and they closed a weary day by getting home fagged, and anything but gratified. The trick of getting the florists to support shows until they could do without flowers, was of a piece with a good deal of the Horticultural Society's doings. The drawing up of the schedules, if not a work of art, was a scheme of artfulness. A favorite gardener was known to cultivate something particular that no one else grew to any extent, a prize was set down that it was positively known he must win, and this was done with many other favorites and subjects, scores made up their minds to try for these prizes the next year, but the next year it was a new set

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of prizes (for a new set of favorites), and all their efforts were vain. One year they offered a gold medal for the best twenty or twenty-five varieties of Hybrid and China Roses, only one paltry stand was shown of single cut blooms, and there was a collection in pots, healthy, and in full flower. The medal was given to the stand because it was shown by the man the prize was meant for. He who showed the best was an intruder. A silver medal was awarded to those in pots, and this disgraceful trick, which was reprobated by everybody in the gardens, was done upon the plea that cut roses were *intended*, and not pot roses, a shuffle worthy of the "Horticultural Society" of that day alone. The continued damage done to genuine floriculture by the great shows manifested itself in many ways. The high prizes raised up a class of mercenaries who cared no more about flowers than the flowers cared about them, the prizes paid them well for potting, collecting, making up stands among them, and going partners in the spoil. The more distant the place of show the more complete were the frauds. The same names were seen winning show after show, sometimes only one of the gang, but if the prizes were very good a second stand would be made up, and two would go. Thus floriculture got out of the hands of true florists into those of gamblers from the raceground, the boxing ring, and the dog pit. One after another combinations were got up under the name of societies, all failing as soon as exposed, till at length respectable men were invited to support a board of censors, to rule in floriculture and check imposition; when, however, the respectable members discovered that they had been drawn together by persons virtually expelled from other societies for fraudulent showing and that they were linked with some of the worst enemies of honest floriculture, they left the offenders "alone in their glory," and as they could not live on each other after the exposure, they broke up and dispersed; yet, on looking back to that period, there was but one pen that did them all the mischief, and it has been ill requited for a service that saved floriculture from becoming the instrument of gamblers, whose property for a time commanded influence, and enabled them to subscribe liberally and sweep off their money in prizes. Let one hope, let us all hope, that purged of this shocking nuisance, floriculture may again advance, but it must be by social meetings and small societies of amateurs and gentlemen gardeners, by moderate payments and at least annual dinners. If twenty people agree to pay one shilling per month for a fund for prizes, no matter whether it be for pansies, dahlias, pinks, or any other flowers, and they reserve—say—three shillings for their annual dinner, the remaining seven will give seven pounds for prizes. How, when, and where these are to be awarded and the dinner held is of little consequence. The flowers and the feast are enjoyed on the same day. It becomes a gathering of persons interested in the subject. They are not driven about like so many dogs, as florists were at Chiswick if they stopped before their own flowers, but they have ample time to discuss the merits of the specimens and to make notes of any they want, in short to exhibit in comfort and admit as many of their friends as they please to have the pleasure; at the close they sit down to their feast, make many resolutions for the

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next year, and finish their day in social enjoyment. Every locality, every flower, furnishes an excuse for raising such a society, and it is such societies, and only such, that like small streams, flow into the great river of floriculture and keep it fresh. My opinion, therefore, is that wherever there are such they should be encouraged, and where there are none they should be established. We may be some time before we get up the enthusiasm which has been sadly damped by fraudulent showing and dealing, but that it is to be done I am sure, and that too by confining the members to persons of good repute, by excluding those who can show *anywhere better than in their gardens*, and especially rejecting those dealers who annually send out a large list of "first class flowers," not one fourth of which are worth the labels on which their names are written. "ANDRE."

TULIP SHOW.

At the house of Edward Hodgson, "Lomax Arms," Great Harwood, June 2nd, 1860.

Premier Prize, Brass Pan, Thomas Chippendale, Charles X. Premier Kettle, Thomas Gibson, Charles X.

FEATHERED BIZZARES.—1. John Baron, Charles X. 2. Edward Hodgson, Sulphur. 3. Nathan Catterall, Seedling. 4. Robert Chippendale, Sir Sydney. 5. Edward Hodgson, Truth. 6. Edward Hodgson, Cattafalque, superior. 7. Edward Hodgson, Surpass Cattafalque.

FLAMED BIZZARES.—Premier, John Baron, Kettle, San Joe. 1. Thomas Gibson, San Joe. 2. Thomas Gibson, Pagannini. 3. Thomas Gibson, Duke Devonshire. 4. Thomas Gibson, Charles X. 5. Robert Chippendale, Plina. 6. Thomas Gibson, Pilot. 7. John Baron, Wellington.

FEATHERED BYBLOMENS.—Premier, Robert Chippendale, Kettle, Baen fait. 1. Thomas Gibson, Baen fait. 2. Edward Hodgson, Beauty. 3. Robert Chippendale, Violet Amiable. 4. Edward Hodgson, Winner. 5. Edward Hodgson, Bordeaux. 6. Thomas Chippendale, Queen of North. 7. Thomas Gibson, Barnaville.

Premier, Nathan Cotterall, Baen fait, Kettle. 1. Edward Hodgson, Pyramid Egypt. 2. Thomas Gibson, Violet Amiable. 3. John Baron, Waller's. 4. Robert Chippendale, Seedling. 5. Edward Hodgson, Baen fait. 6. Edward Hodgson, Pusillow. 7. John Baron, Bagquet.

FEATHERED ROSES.—Premier, Richard Bertwistle, Kettle, Count. 1. Robert Chippendale, Queen of Prussia. 2. Edward Hodgson, Byron. 3. Edward Hodgson, Crewe. 4. Edward Hodgson, Martin Seedling. 5. Edward Hodgson, Count. 6. Edward Hodgson, Martin Seedling. 7. Edward Hodgson, Martin Seedling.

FLAMED ROSES.—Premier, Edward Hodgson, Aglaia. 1. Thomas Chippendale, Rose Celestial. 2. Thomas Gibson, Vanquere. 3. Edward Hodgson, Lady Catherine Gordon. Thomas Chippendale,

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Newcastle. 5. Thomas Chippendale, Martin Seedling. 6. Edward Hodgson, Princess Gloucester. 7. Thomas Gibson, Ponceau Brilliant.

Bizzare Breeders.—1. Wilson's King. 2. Edward Hodgson, Martin Seedling. 3. Edward Hodgson, Martin Seedling. 4. John Baron, Martin Seedling. 5. Thomas Chippendale, Martin Seedling. 6. Thomas Gibson, Omar Pacha.

Byblomen Breeders.—1. Richard Bertwistle, Martin Seedling. 2. Edward Hodgson, Martin Seedling. 3. Thomas Gibson, Sancta Sophia. 4. Thomas Chippendale, Martin Seedling. 5. Edward Hodgson, Malakoff. 6. Robert Chippendale, Martin Seedling.

Rose Breedees.—1. Robert Chippendale, Martin Seedling. 2. Edward Hodgson, Martin Seedling. 3. Edward Hodgson, Martin Seedling. 4. Edward Hodgson, Martin Seedling. 5. Edward Hodgson, Martin Seedling. 6. Edward Hodgson, Martin Seedling.

Selfs,—1. Richard Bertwistle, Mind'or. 2. Thomas Chippendale, White Perfection.

TULIP SHOW.

Held at the "Petre's Arms," Hilt-mill, near Blackburn, June 9, 1860. Extra Premier Kettle, Thomas Gibson, Charles X. Premier Kettle, Edward Hodgson Charles X.

Feathered Bizzares.—1. Thos. Gibson, Charles X. 2. Thos. Gibson, Sydney. 3. Edward Hodgson, Truth. 4. Robert Chippendale, Lilford. 5. Thomas Gibson, Aticus. 6. Thomas Gibson, Royal Gem.

Flamed Bizzares.—Premier, Robert Chippendale, Plina. 1. Thomas Gibson, Charles X. 2. Thomas Gibson, San Joe. 3. Thomas Gibson, Pilot. 4. James Foulds, Devonshire. 5. Thomas Chippendale, Polly. 6. Edward Hodgson, Martin Seedling.

Feathered Byblomens.—Premier James Foulds, Kettle, Violet Amiable. 1. Thomas Gibson, Martin Seedling. 2. Thomas Gibson, Baen fait. 3. Edward Hodgson, Bagquet. 4. Thomas Gibson, Bernivold. 5. Edward Hodgson, Beauty. 6. James Cleyg, Bordeaux.

Flamed Byblomens.—Premier Kettle, Thomas Chippendale, Demain. 1. Robert Chippendale, Martin Seedling. 2. James Cleyg, Martin Seedling. 3. Thomas Gibson, Beauty. 4. Thomas Gibson. Violet Amiable. 5. James Foulds, Bane fait. 6. Edward Hodgson, Pusillow.

Feathered Roses.—Premier, James Cleyg, Kettle, Isabella. 1. Thomas Gibson, Triumph Royal. 2. Edward Hodgson, Crewe. 3. Edward Hodgson, Newcastle. 4. Thomas Gibson, Claudiana. 5. Edward Hodgson, Madam Saint Arnold. 6. Thomas Gibson, Walworth.

Flamed Roses.—Premier, Kettle, John Baron, Aglaia. 1. Thomas Gibson, St. Arnold. 2. Edward Hodgson, Aglaia. 3. Edward Hodgson, Fairy Queen. 4. John Cleyg, Vandicken. 5. Thomas Gibson, Hebe. 6. John Cleyg, Martin Seedling.

Bizzare Breeders.—1. James Foulds, Omar Pacha. 2. Thomas Gibson, King. 3. James Foulds, Prime Minister. 4. Edward Hodgson, Martin Seedling.

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BYBLOMEN BREEDERS.—1. James Foulds, Omar Pacha. 2. Thomas Gibson, Earl of Warwick. 2. Robert Chippendale, Martin Seedling. 3. Robert Chippendale, Martin Seedling. 4. Richard Bertwistle. Martin Seedling.

ROSE BREEDERS.—1. Richard Bertwistle, Martin Seedling. 2. Edward Hodgson, Martin Seedling. 3. Robert Chippendale, Martin Seedling. 4. Thomas Gibson, Queen of Prussia.

SELFS.—1. Richard Bertwistle, Mind'or. 2. Edward Hodgson, White Perfection.

THE ORGAN OF FLORICULTURE.

THERE ought to be an organ of floriculture, and fourteen years' success through all the vicissitudes of retiring editors, and changes of proprietors, prove that the "Midland Florist" is upheld by its readers and contributors in spite of every disadvantage. Where then can we look for a better organ, or a more fitting representative? Among a very *large* community of *little* gardeners we have been looking very anxiously for the last two numbers, for we have seen many changes, and our hopes have been many times disappointed; every now and then we had a number as heavy as an unbaked loaf, long-winded articles from the "Chronicle" that would not interest us florists, or a drawling, puling, childish paper of "Mr. Beaton's," from some other paper, showed very great weakness at head quarters; but, instead of throwing up the work, we roused ourselves a little, and sent a few articles, and this feeling always prevailed, so that the work has always been kept up somehow as the organ of floriculture, and we do hope that we shall always be able to keep it up as such—where else can we look if that fails us? Some say the "Gardeners' Gazette," but we have that too! It is another kind of advocate, it is the pioneer that clears the way for floriculture; the machine that smashes all obstacles, and makes us a clear road; but it is not like the "Midland Florist." They are both necessary to the salvation of British gardening, which has suffered greatly from fraudulent showing, judging, and dealing, and had it not been for the "Gardeners' Gazette" it would have suffered ten times more. The "Midland Florist" has remonstrated, but its guns were not heavy enough to attack "National" defences which the "Gazette" crumbled to atoms, and drove the garrison into a sort of refuge for the destitute. To return, however, to the subject we set out with, our anxiety as to the future of the "Midland Florist." The opinion at the meeting where the first number was read, was that "it was too good to last," some said, "new brooms sweep clean," and so forth, "we shall see if the new editor can keep it up," said the chairman, "but I recognize very few of the old contributors;" accordingly, when the second number came out we were all full of excitement, and afterwards, when the whole had been read through, we came to a resolution that there had not been three consecutive numbers so good for the last three years. Now, Mr. Editor, all we want is to have a few prospectuses sent down to our locality, Nottingham and Leicester—and why not all through the country?—that it may be made known, for *ma*

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have dropped it because of double numbers, that disturbed all annual subscriptions, and cost five pence extra, because the newsman had to write and ask for 3d which cost him a stamp, and the reader had to pay another penny to send his 3d. What the object of double numbers was I never could see, and I trust that under the new management I never shall. Writing for a good many staunch florists, I say we are satisfied that if you can keep up the quality, there is not an honest dealer in flowers who will not advertise, and hundreds of us never look beyond the covers for what we want to buy. The publication of the Almanack was a good plan, for instead of cramming the work month after month with directions what we are to do, we have merely to refer to that work, which evey reader ought to possess, and which ought to be bound up with the volume when complete. A few more last words, and I have done. I hope those who used to contribute out of pure charity to the executive and good will to the work, will resume their duty, for duty it is, to communicate whatever they think will add to the general knowledge; to second the new proprietors; for the main object of all is to make the "Midland Florist" the only organ of floriculture. "One of the LEICESTER BREED."

A NECESSARY CHANGE.

FLORICULTURE is just now all but dormant. The meetings of those interested just keep it alive, and we hope, from the letters we continue to receive, that these social meetings will become general wherever it is practicable for a few gardeners to attend. The importance of a more general communication between amateur and professional gardeners cannot be over-rated, "Knowledge is power," and whatever one man knows is naturally imparted to those who assemble now and then to talk over affairs. We had no sooner undertaken the conduct of this work, than we were inundated with letters, some offering advice, some intended to get us into a controversy, or coaxing us into the discussion of subjects which are altogether uninteresting to all but the two parties concerned, and we have allowed some professed advantages to go by, rather than mix ourselves and the work up with any thing that can be construed into party feeling. The history of the "Midland Florist" has been laid open to us. The affairs of former editors very carefully and particularly explained. We are told how the work was nearly ruined when one editor left it to start an opposition work, and how he joined a man of more note than virtue in partnership in the literary speculation, how they quarrelled and called one another every thing that was bad, and how it was pronounced by the readers of the "Midland Florist" that both of them in that particular had told the truth, lastly how they parted, one turning the other out of the partnership and going on with the work himself. But we are also told that the "Midland Florist" stood the brunt of all its new opponents, and that notorious pair especially, and improved in every respect most, when the greatest efforts to injure it had been made. Some pretended friends have addressed the proprietor, cautioning him against the

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employment of particular persons mentioned as editors, all of which letters have been handed to us as a matter of course, and we are sorry to say in our ignorance of who are and who are not writers, some are wholly unknown to us, and no matter how long they remain so, we are referred to the double number of November and December as a proof that the advertising connection had wholly deserted the work, and we were told that "what with one thing and another," it had been supposed to be dead. But some try to accomplish what they predict, and we have letters before us inquiring "if the work is to come out again," as the persons who serve the writers say "the answers to inquiries in London were, that they do not think it would appear any more," we are endeavouring to trace these rumours; retailers who receive their parcels from London without any particular book they order, inquire of their agents who serve them; but agents are not interested in damaging a work, they must have had the kindly report from somebody whom they send to for it, but one letter distinctly tells us that it was at the office of publication that the inquirer was informed "it was not likely to come out any more." Of course this requires confirmation, although there is too much reason to believe that some one about the office would rather see it die than live. It is so essential to us to obtain all letters with the least possible delay, that we desire our readers to address us in future *at the Printing Office*, and to pay especial attention to "Notices to correspondents," for they will be the last lines we write each month, and contain our final arrangements. That there must be a change we know; we are quite aware that the work was beneath the notice of Messrs. Low and Son, but as the former proprietor was in their service they obliged him, and when he sold it, they consented for a time at least to continue the publication, that there might not be too great a change all at once. But the late proprietor has not felt the same interest, (nor do we think used the best means to forward the work,) that he did when it was his own, it has therefore been absolutely necessary to remove the publishing office for the future; first, for the obstacles which we believe have been thrown in its way; and secondly, because we know full well that Messrs. Low and Son undertook it to oblige us, and used their best endeavours, but they will be heartily glad to get rid of it; while the late proprietor attended to it, they found him often losing their time to attend to his own work; perhaps complaints from them induced him to part from it; but we did expect that being released from writing and proof reading, he would have spared time to send on communications directly he received them, instead of allowing them to accumulate until they were too late to be of service, although we sent for them day by day; moreover, we thought he would be loth to say a word against his old pet work. It is necessary now to show the floral world that the "Midland Florist" can be had of all booksellers, and that the best way to get it is to order it of those (in their neigbourhood) who sell the "London Journal," "Cassel's Family Paper," the "Family Herald," and such like works, and let agents know where it can be had wholesale. We may—for it has been settled since we begun this article—now announce, that Mr. G. Vickers will henceforth be the publisher, and

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that all communications must be directed "to the Editor, at Straker and Son's, 80, Bishopsgate Street, Within;" and further, that subjects to be noticed in the work must be at the Printing Office on or before the 20th, and that we cannot be answerable for the insertion of any advertisement received after the 24th; with this perfect understanding between Printer, Publisher, Editor, and Subscribers, we believe a new and prosperous career is open to the "Midland Florist." We again acknowledge our obligations to Messrs. Low and Co., and are convinced they did their best for us.

ON NAMING FLORISTS' FLOWERS.

We frequently judge a man's taste by very trifling acts, and sometimes fancy we can take the measure of his capacity by the names he gives to his flowers. Some men exhibit a rare consistency, by taking all the names they require from the same source, and selecting them with some regard to their applicability to the subject itself—as names from the Heathen Mythology, or from the Waverly Novels, or winning race-horses, or great statesmen and their ladies, or commanders of renown and their wives; sometimes, indeed, this is carried on so far as to name a flower after a lady not in existence, but simply because there has been a lord of that name. To instance the utter want of taste among some men, imagine two persons having raised a red flower; one calls his Miss Taylor, and the other Mars; now, had there been a Miss Taylor with a very red face, and he had desired to remind the lady and her friends of her infirmity, one might have given him credit for his common sense, if we had condemned his cruelty; but Miss Taylor, the young lady he desired to compliment, was an elegant and exceedingly delicate young lady, at home for her holidays; now this man, in such a trifling act as that, betrayed sad ignorance and vulgar taste, or rather want of taste. It was what the world calls a left-handed compliment. The one who called his red flower Mars, offended no rule of propriety; and when we see among the flowers raised by the same person, the name of Diana given to a white flower, and Flora given to a beautiful one, Hercules to a large and strong one, Cupid to a small one, there seems to be some consistency and thought about him. But the rage for names has rather subsided, in consequence of the great check upon the number tolerated; formerly there used to be from one to three hundred new dahlias a-year, and having answered the purpose of the owners, by bringing a price equal to the best, and been grown one year, they have been heard no more of. At that time, all the sources for names were ransacked; the names of songs, among other sources, supplied a number,—the Rose of Yarrow, Poll of Plymouth, Crazy Jane, Joe the Marine, and many others; the names of wines were resorted to, Claret and Burgundy, Constantia and others, will be recollected by many. The stars shed their influence over the novelties, for we had Mercury, Venus, Jupiter, Ursa Major, and many more. Then there were many botanical names, the most stupid of all, because many were inapplicable, and the distinctions so ridiculously small or

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unimportant; thus Rubra cœrulea, from which we may expect red and blue, or a bluish red, was a dirty purple, and there were fifty others of the same colour; Picta formosissima was a striped flower, of no form at all, whereas its name signifies it was in that particular superior. If such names were adopted in earnest, they should be descriptive of strong points only; but it was an affectation altogether, to pretend to describe by botanical terms characters shared in common with scores. Then some of our florists were fond of plays and theatres, and one lot would be honouring all the dramatists, another would be selecting from characters in the plays, while a third selected the favourite performers, male and female. But of all the sources that were resorted to for names, the most improper was the Bible. It was a wanton attack upon the scruples of many pious Christians; a perversion of sacred things. It betrayed a species of ignorance not pardonable in the age we live in; a folly, if not a wickedness, without an excuse. If it were done in ignorance, it was bad; if in contempt, it was worse. Names are in general given to flowers in compliment to somebody or something, but what can be the motive when taken from the sacred writings? what excuse can be given for the names of Jehu, Cherubim, Og King of Basan, King Ahasuerus, and such like? There is nothing to recommend them, nothing euphoneous; it seems a kind of familiarity not at all creditable, a disrespect openly shown to a book in which millions place their hopes of happiness now and hereafter, and it is to them highly offensive. We are not going to open up a theological question, for religion is a subject not to be touched upon in works like these, except so far as religion may be defended anywhere, against any persons who make horticulture the means of offending. We know that in one or two instances the name has been given thoughtlessly by people who meant no harm. We have touched upon the subject with a view of putting a stop to, at the best, a foolish, and, so far as example goes, a mischievous act, that may grow into a practice. If we put it on no worse footing, it is extreme bad taste; there are persons who would not even grow a flower under a name at the bare mention of which, we are told on the highest authority, every knee shall bend. We approve of the taste that selects appropriate names from dramas, from novels, from histories; and these are inexhaustible. A single play would suggest half-a-score,—Sir Peter Teazle, Lady Teazle, Sir Benjamin Backbite, and the rest of the dramatis personæ in the School for Scandal would last a very lucky man some time, and such names are far better than those of popular idols. The Duke of Wellington, Sir Robert Peel, Lord John Russell, Queen Victoria, Prince Albert, and many equally important persons and personages, have had their names given to twenty things the same season; and it is far better that names, not of such temporary or such great interest, as the case may be, should be taken, as the less likely to be imitated. It should also be a sort of principle among florists to avoid naming things the same as others are already named, or likely to be named, and even to make choice of something that will afford a series. A steam-boat company has set an example worth following; one, with nine or ten boats, names the whole after flowers; we have the Lily, Snowdrop, Pink, and so on: then there is a company which names all after the

stars, such as Venus, Mercury, &c.; another after precious stones, Diamond, Ruby, Emerald, Topaz, &c.; and the Iron Steam-boat Company, with their first four boats, had Starlight, Daylight, Twilight, and Moonlight, and having exhausted the lights, began on what some people call the dark side of the case, Matrimony, Bachelor, Bridesmaid, Wedding Ring. All these fancies are well enough, but it is as well to commence, with something that will supply enough, so that the source should not require changing. And while upon the subject of naming flowers, we would suggest the propriety of attaching to them a brief but unmistakeable description, that should stick to it like its name; in fact, one should be identified with the other; it would prevent many mistakes. It would be advisable also in pansies, tulips, and many other flowers, to let the title in every respect show what it is; for instance, bizarres should be always masculine names, roses all feminine, and byblomens all neuter; in pansies, the yellow grounds all masculine, the white grounds all feminine; in picotees, heavy edges all masculine, and light ones all feminine: something of this kind would be generally useful, and make us all familiar with the main class from the hearing or reading of their names. Taste ought to have done this; but when we consider the various grades of life from which some of the best florists have sprung, and how many of the very ignorant and humble classes have been concerned in the naming as well as the raising of our best flowers, it is not to be wondered at. Let us express a hope that these few remarks may be of some use among those who rarely give themselves the trouble to think, for however simple a thing we may have to do, there is nothing worth doing that is not worth a consideration of what is the best way to do it.

FLOWERS ON WALLS AND ROCKWORK.

When we see primroses, violets, antirrhinums, pansies, wallflowers, and ferns growing out of an old wall in the crevices that would seem to contain nothing to support vegetation, we may calculate very fairly upon being able to supply seeds where there are none, and to greatly increase the number of those objects which flourish so well as it were by accident. How much more then may we hope to set all these things growing where there is at least a lodgment for a little soil. Rockwork is the name given to many structures, from a heap of stones shot out of a barrow, and earth tucked into all the hollows, to an elaborate imitation of natural rock, or the scientific imitation of a natural ruin. We can understand how things grow where the artist has left hollows as complete as a flower pot, but one seeks to obtain the growth of such as we have mentioned peeping out of crevices, and no planting can well produce this, and there is only one way of producing this. Take a barrow-full of good loam, and dung and mix it up with water as thick as thin mortar; now take of the various seeds that we wish to grow half-an-ounce each—antirrhinum, wallflower, pansy, primrose, violet, alyssum, daisy, and any other flower we please—sprinkle and mix them until they are fairly distributed through the whole mass, and remember that everything depends on the complete mixture; then with a trowel

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lay a thin coat of this on the top of a wall or the upper part of the building we desire to ornament, next fill up all crevices by a thin coat on every ledge or projection, and on every part where it can be lodged—this should be done now or next month—with a garden engine damp all this where it appears to be drying, but do it with the finest rose you have, that it may not wash it down. The effect of this is that every seed will grow, for it ought not to be laid on anywhere too thick for the seed to come through. There will be many more plants than will be wanted, but there will be plenty die for want of food as it were, but there will be enough live to gratify the cultivator, and the effect will be very pleasing. There may appear a little extravagance in the quantity of seed, but we are supposing you have enough rockwork, ruin, or old wall to require the barrow-full of mixture; and if you want less, if your place is small, mix up only the quantity you want, for you can do the same thing on a small scale, only bearing in mind that the seed must be well mixed, and that the stuff is not to be laid on thick anywhere. Some may choose to put it along the top of a garden wall, there will sure to be some washed down, and as it descends it will lodge in any crevice that opposes its downward movement. We have only mentioned those seeds which produce what we have growing here and there upon our own old wall, but the experiment may be made with any flower that does not root deeply.

G. GLENNY.

A FEW WORDS FOR FLORISTS' FLOWERS.

IN our younger days an amateur garden, however small, was generally graced with a tulip bed, an auricula frame, a collection of carnations, which were accommodated under the tulip-awning after the bulbs were taken up, and the outer beds filled with ranunculuses. These supplied good occupation for an industrious man, and justice to one did not prevent proper attention to all. Hundreds of gardens contained all these, which the cultivator grew well, and many approached perfection. When men were driven from their little plots of ground to make room for houses, too many were unable to get room for their plants, and they were dispersed under the auctioneer's hammer, or sold a bargain to persons further from London. The great majority never returned to floriculture again, and there was such a general break up that societies depending on this class were broken up also, and there was for the time being a great lull in every locality that was swallowed up by the people of bricks and mortar. But as floriculture had taken deep root, there was no such thing as destroying it. Gardens rose "further a-field." Those who had been gratified in the smoke of London were more than pleased with gardens further in the country, and there is really no impediment to the restoration of the fancy. A book, which was highly thought of at the time of its publication, called the "Florists' Directory," contained but few subjects, but they were all that were then called florists' flowers—the hyacinth, tulip, ranunculus, auricula, anemone, carnation, and perhaps one or two more. These were well illustrated, and the book, although published at a guinea, had many readers and admirers, and moreover made many

enthusiasts; but florists raised subjects to that distinction by taking their culture in hand with great earnestness, and within the last thirty years they have claimed many more. The characteristic of florists' flowers is, first, they must be capable of propagation without seed, so that a variety may be perpetuated and collections formed. Some may propagate by root, or tuber, or bulb, others by cuttings or layers; but if the florists once claimed half-a-dozen, they have now appropriated a score and more. The rose, the geranium, the verbena, dahlias, pitunia, picotee, pansy, hollyhock, fuchsia, phlox, delphinium, in short any thing that can be perpetuated is seized upon by the florists, converted to his form, and appropriated to his fancy. We can recollect when botanists were excessively annoyed at the disturbance of species, and the destruction of botanical distinctness by the florists. We have seen a professor in a towering passion at the exposure of the fallacies by which the humbug of botany was, and is even now, kept up. Botanists introduce nearly all the novelties from abroad as species, and florists knock half-a-dozen into one before they have been here two seasons. Let us take the dahlia for a sample. The botanists usher into the world at different times no less than eleven species, all from Mexico; florists who could see the humbug of twisting a shade of color, a slight difference in a leaf, or some difference in the height, into new species, very soon showed the world that they could manufacture much better species than botanists could find, and from a single pinch of seed produce infinitely wider changes than any of the eleven foreigners exhibited, and convinced everybody that chose to be enlightened that the eleven imported sorts were nothing more than seedling varieties. This was so galling to botanists that one professor openly lectured against double dahlias as monsters, and condemned hybridising altogether as destructive of the pure species. Of course he has been obliged to swallow the leek long since, and be very civil to double flowers and hybrid rhododendrons, and also to round blooms of phloxes, pansies, and cinerarias, although the circular corollas which please the florists are altogether contrary to the "pure species." The fact is, florists have taste, the botanists have none. The old heartsease in the wild state is far more acceptable to the botanist than beautiful circular flowers of the present day; but the florist has changed the very nature of the plant or flower whenever he has set his mind upon it. Look at the fuchsia. The idea of the sepals reflexing, which was never thought of till "The Properties of Flowers" was published, was positively ridiculed at one time, as were many other innovations of the florist, is now considered worthless if not reflexed, and the cinneraria, which at one time was a narrow petalled open star, and one of which let out by Mr. Waterer at a guinea or half-a-guinea a plant, when the vacancies between the petals were absolutely wider than the petals themselves, is now a close circular flower as anticipated in "The Properties of Flowers," and hundreds of far better things than Mr. Waterer's have been consigned to the dungheap. Florists have underrated their own importance. They have, as botanists say, outraged nature. If we are to believe German prints and descriptions, the botanists will have suffered another loss; Vilmorin, of Paris, has advertised a double zinnea, and if the picture be correct nobody will

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grow the single after this is fairly out, for the sporting into colors is as certain as that the single ones do. Not that subjects which die the first year can ever be florists' flowers, but they may be spoiled, as the botanists call it, by coming double, and by the pains which cultivators take to retain all their (to us) good qualities. We say florists underrate their own importance, for if they look around them they see nurserymen following their example, introducing the florists' flowers in to their catalogues, buying up new ones wherever they can be found; and firms that once considered them not important enough to keep, now treating them as equal to their own plants. But whatever ranks they may be taken up by, whatever station, their new cultivators, they owe their origin and their progress towards perfection to the florists of humble means and occupations, and even now our best raisers are among the humble classes. We will not deny that roses, geraniums, and fuchsias have been successfully raised by men of means before now, and the French florists have done their part nobly with regard to roses. So far, however, as taste goes, the English have done much towards weeding out those which do not possess good properties, and consequently not more than one in twenty are tolerated; and to this taste do we owe the exclusion of hundreds which once discredited our collections of roses, and the general adoption of a better taste. All these truths must be admitted and more. The dahlia has rapidly improved in England, and the best have been raised here, although now and then we get a star from the Continent. The best tulips by far have been produced here, and many of the finest within the smoke of the metropolis. In short there is not a single family among florists' flowers that does not exhibit its finest specimens from that of English or Scotch origin. Persevere, then, brother florists, in the raising of new flowers, and let every good novelty be seen as soon and as often as possible by all who take an interest in every improvement. Tell each other where to get the best plants, and how to grow them; for hundreds who want to begin their cultivation do not know who they can depend on for a fair start. Let us hear no more of collections good enough for beginners; they ought to have the best, or else they cannot compete with older growers.

NEW HORTICULTURAL GARDENS, KENSINGTON.

THE arrangement with the Royal Horticultural Society for the appropriation of a considerable portion of the area to the westward of the museum as a Metropolitan Horticultural Garden, will add considerably to the completeness of the South Kensington establishment, and enhance its attractiveness. The general design of these gardens our readers will have gathered from the preliminary statements published when the project was first set on foot, about a year and a half ago. The design is now very nearly approaching its accomplishment, and availing ourselves of an invitation issued by the council of the society to their fellows and their friends to inspect the works, we are enabled not only to congratulate them upon the energy which the rapid progress made shows they must have exerted, but to convey some faint

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idea of the general effect. The area occupied by these gardens is in form a parallelogram of twenty acres in extent, enclosed on all four sides by a continuous arcade, varied in the details of its design to embrace the different schools of Italian architecture, and at regular intervals broken in the plan and elevation in order to prevent the apparent monotony of continuity in the facade. At the upper or Kensington end—which is considerably raised above the general level—is the chief feature of the design in the shape of a gigantic conservatory, which, breaking boldly out from the front line of the general elevation, and rising high above it, forms an imposing centre equal to nearly one-third of the whole side of the square, and to which the arcades appear as subsidiary wings. The arches of that part of the arcade next the conservatory are designed after the terraces of the Albani palace, and a pleasing variety of color is produced by the introduction of red brick pilaster between the Portland stone columns, from the capitals of which the arches, which are also of Portland stone, spring. In the lower part of the arcade, the arches are subdivided by means of light terra-cotta columns—Byzantine in style, and highly enriched, The general effect of this arcade is light and elegant, and forming as it does a continuous covered way all round the garden, shaded from the rays of the sun, and protected from the rain, will doubtless become a favorite promenade. Alcoves or recesses are included in the design, some of which will be fitted up as orchestras, where on fête days bands will be stationed, while others will be occupied by groups of statuary, fountains, parterres, and other appropriate ornamentations.

In front of the conservatory, on the raised terrace, there will be a group in bronze, which is being executed by Mr. Denham, as a memorial of the exhibition of 1851, and below this a lake, or plunge, supplied from an artesian well at the rate of thirty five to forty gallons of water per minute, and which will flow, by means of a double action Apphold pump, a continuous current into a number of little canals, by which the entire garden is diversified and the parterres intersected. Amongst the minor details are flower beds laid out in quaint devices, like shawl patterns, the several colours being produced by an ingenious admixture of box and other dwarf evergreens, bordered by meandering fringe like walks of different colored gravels. slate, and Derbyshire spar; and filled in with blossoming flowers. Upon these considerable pains have been taken, and though they are far from finished the result is pleasing and novel, and has, we are told, been rewarded by the expressed approbation of some royal and many noble ladies. Further, to meet the taste of those who visit the gardens rather for the purpose of amusement than to give or receive instruction, there is to be a maze, after the fashion of that at Hampton court—while for the contemplative or confidential there will be shady nooks, green alcoves, and mossy hillocks, where, under the broad-spreading boughs of the cedar, a soliloquy or a tête-à-tête may be enjoyed without fear of intrusion. An aviary and an aquarium are likewise amongst the contemplated "properties," while for that most essential feature, the refreshment department, the most ample provision is to be made.

Judging from what we have seen of the works as they now stand,

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and what we have heard they will be when in their finished state, we have no doubt that the South Kensington Horticultural Gardens will speedily take rank as the most attractive place of amusement, and healthful and instructive recreation, in London, especially in the summer.

Her Majesty, who has been more than once of late over the ground, examining the progress of the works, in which we are informed she takes great interest, will open the gardens early in June, by which time all the arrangements are expected to be completed. In addition to the royal patronage the institution will have the advantage of close proximity to the Great Industrial exhibition of 1862, the site of which is also upon the royal commissioners' grounds, and only separated from the Horticultural Gardens by that part of the arcade where the refreshment department will stand, and from which creature comforts will be dispensed to the visitors of the exhibition. "LLOYDS."

MESEMBRYANTHEMUMS.

THE profusion of blossoms produced by this extensive family of plants, and the neatness of their growth, ought to render them greater favourites than they seem to be at present, especially as summer ornaments to our flower garden. They are much hardier than is generally supposed; and although, from their succulent nature, they will not stand frost, yet they may with success be planted out in the open air much sooner in the spring than they usually are. Mesembryanthemums that are intended for planting out in the flower garden, should be repotted in March, in soil composed of fresh loam and peat in equal quantities, with a sufficient portion of sand to prevent it from becoming compact or caked. When they are potted the soil should not be pressed very tight, and sufficient space should be left for half-an-inch of fine gravel (from which all the sand has been thoroughly washed) to be placed on the top; this will keep the surface of the soil from becomming hard, and also keep it moist; for although these plants are impatient of wet, yet nothing is more detrimental to their vigorous growth than drought. After they are potted, they should be placed in a frame, and kept close and moderately warm till they have taken fresh root, when they should be gradually hardened that they may be turned out of their pots. A warm sunny spot is proper for them; and it is best to cover the surface with stones. After they are turned out, they ought to have a slight framework of hoops placed over them, in order that they may be carefully protected from cold winds and heavy rain for some time, and especially at night. Thus treated, they will amply repay the trouble that has been taken with them, by producing a constant succession of their splendid blossoms till the frosts in autumn stop vegetation. Those who have not got a stock of these plants should set about obtaining cuttings, which may be rooted without any difficulty if planted in sandy soil, and kept moderately dry in a frame, or under a handlight in the greenhouse. Young plants raised late in the spring will not of course be so capable of producing the effect during summer which stronger plants would

do, but they will gain strength, and should be taken up carefully before they have sustained any injury from frost; potted in sandy loam, in pots as small as the roots will allow, and carefully set by for the winter, on a dry shelf in the greenhouse, where they must be kept dry, only just water enough being given to prevent them from shrivelling. In the spring they should be again repotted, and planted out as above.

THE DOUBLE YELLOW ROSE.

The following passages from old books, relating to this flower, which it puzzles everybody to grow well, are interesting:—"Whereas all other roses are best natural, this is best inoculated upon another stock. Others thrive and bear best in the sun; this in the shade: therefore, the best way I know to cause this rose to bring forth fair and kindly flowers, is performed after this manner. First, in the stock of a Francfort rose, near the ground, put in the bud of the single yellow rose, which will quickly shoot to a good length; then, half a yard higher than the place where the same was budded, put into it a bud of the double yellow rose, which growing, the suckers must be kept from the root, and all the buds rubbed off, except those of the kind desired, which, being grown big enough to bear (which will be in two years), it must in winter be pruned very near, cutting off all the small shoots, and only leaving the biggest, cutting off the tops of them also, as far as they are small. Then in the spring, when the buds for leaves come forth, rub off the smallest of them, leaving only some few of the biggest, which, by reason of the strength of the stock, affordeth more nourishment than any of the other, and the agreeable nature of the single yellow rose, from whence it is immediately nourished, the shoots will be strong and able to bear out the flowers, if they be not too many, which may be prevented by nipping off the smallest buds for flowers. The tree should stand something shadowed, and not too much in the heat of the sun, and in a standard by itself, rather than under a wall." That which follows is from a book called *Systema Horticulturæ*, dated 1688:—"There is now a flower-bearing tree that yields blossom so beautiful as the rose, whereof the yellow Provence rose is the most beautiful where it brings forth fair and kindly flowers, which hath been obtained by budding a single yellow rose on the stock of a flourishing Francfort rose near the ground: when that single yellow is well grown in that branch, inoculate your double yellow rose; then cut off all suckers and shoots from the first and second, leaving only your last, which must be pruned very near, leaving but few buds, which will have the more nourishment, and yield the fairer and more entire blossoms. This tree, or a layer from a rose of the same kind, delights most, and blows fairest, in a cold, moist, and shady place, and not against a hot wall."

INFLUENCE OF HORTICULTURAL PURSUITS.

The tone of many of the writers on Horticulture is so opposed to that harmonious way in which we wish to carry out our objects, that it would surprise the public were we to give them an idea of the number

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of essays we are obliged to reject, only because the writers are not content with giving us what we require—useful information, but must use it as a means of openly or covertly censuring others, who do not happen to think with them on all subjects, or of whose fame, in some matters, they are envious, or of whose real, or supposed offence, they are unforgiving. To this ill-natured course we have an utter objection, and will not knowingly lend our columns for the best paper in the country with any personal allusion to the doings or the omissions of others, that do not immediately concern the subject. Is there any pursuit in the world so calculated to produce kindly feelings and goodwill among all classes, as that of Horticulture? Can any one go alone, or with company, into a really well-kept garden, without sensations different to all other? Whether it is the beauty or the fragrance of the flowers, or both combined, we know not; but we have noticed people of all classes, the humble and the exalted, the giddy and thoughtless, and the sturdy and contemplative,—the mechanic, the labourer, the tradesman, the gentlemen, and the prince,—and all subdued alike, all delighted, although they had different ways of expressing their pleasure. Whatever, then, relates to gardening should partake of the best features—should excite the same feelings. Next to the delight experienced in a garden, is the contemplation of it. Acrimonious altercation, angry discussion, personal allusions to any one's disparagement, are all out of place. If a man can grow a thing better than his neighbour, he may congratulate himself on his success, but not triumph over his competitors further than receiving the reward of his achievement. His less fortunate brethren then add greatly to his pleasure by the acknowledgement of his superiority. Let him plume himself upon his attainments in a tone which boasts of his own talent and depreciates that of others, and they seek for reasons less creditable than superiority to account for his present success. If a man cannot pursue gardening without acrimonious feelings—if Horticulture cannot be promoted without jealousy and ill-nature predominating in a man's heart, that man must be bad, and can pursue nothing calmly and temperately. Society and science are damaged by such people whenever they take a leading part; and it is the best reason in the world for avoiding at all times the election of such to office. If such men are permitted to write according to their own nature, and indulge their bad feelings by personal allusions or arrogant assumptions, they would not only be always in broils themselves, but they would involve every work in which their writings were admitted. We dislike all such people, and object to all such papers. We should like to cultivate the higher minded notions. We desire to see Horticulture perfectly neutral ground, on which men of all opinions in other matters should meet, like the merchants of all nations on 'Change. From the moment a man enters a society to the time he quits it nothing but the objects of that society should be permitted by him to occupy his thoughts; and if any overstep the bounds, and introduce discordant subjects, his best friends should turn round upon him; and check it. There cannot be too severe a fine imposed on all who transgress the rules by mentioning subjects foreign to the intention of the meeting, and derogatory to any living man. If societies are strict in any one point, it should be in this.

that two of the most opposite tempers, feelings, intents, and opinions, personally opposed on every conceivable point, should, in the society for the promotion of Horticulture, lay down their arms, proclaim a truce, to bury, not their dead, like two opposing armies, but their animosity. Were this insisted on, societies must prosper, were this enforced, the science must advance; and, with the necessity of doing our part before our eyes, we have determined that no articles in this work shall encourage party or personal differences; and that, wherever we can show the advantages of harmony and friendly feeling, we shall not fail to do so. Our aim is to discourage everything but the advantage of the science and those engaged in it. Whatever will instruct, inform, and improve those but little acquainted with gardening; whatever will promote the interests of those engaged in it as a profession, will always be found paramount in our highly patronized miscellany; and if among our readers there be any who can instruct others, instead of requiring instruction themselves, the best thing they can do, is to improve on anything they find in these columns, and let their fellow men derive the advantage of the improvement.

THE CINERARIA.

It will be recollected that this very beautiful plant has a small starry flower, with narrow petals, projecting outwards, all round a yellow disc, such petals being pointed or notched. Hitherto, if a new colour, or an unusual size, has been attained, it has been considered a justification to name the plant, and send it out as a new one. All this may be very well for a time, but the period has arrived, when some regard should be paid to the form and habit of a new variety, and the properties may be summed up in a few words.

Quoted from Glenny's "Properties of Flowers."

"The petals should be thick, broad, blunt, and smooth at the ends, closely set, and form a circle without much indentation.

"The centre or yellow disc should be less than one-third of the diameter of the whole flower; in other words, the coloured circle formed by the petals should be wider all round than the disc measures across.

"The colour should be brilliant, whether shaded or self, or if it be a white, it should be very pure.

"The trusses of flower should be large, close, and even on the surface, the individual flowers standing together with their edges touching each other, however numerous they may be.

"The plant should be dwarf. The stems strong, and not longer than the width across the foliage; in other words from the upper surface of the truss of flower to the leaves where the stem starts from, should not be a greater distance than from one side of the foliage to the other.

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"In these remarks we allude to the plant when in perfection, for, as the cineraria is a constant bloomer, it continues to branch and bloom long after its proper truss has lost its chief beauty, and its form; the blooms are then more distant and straggling, but still beautiful, for every little branching truss of flowers will preserve the character of the principal one, and the plant look well to the last.

CULTURE.

With regard to the culture of this plant, it thrives in the composition which suits almost everything; rich, light, porous soil. Loam, peat, and well decomposed dung, in equal proportions, will grow it well. The seed may be sown in shallow pans or pots in May, kept rather moist in the stove or slight hot bed, and when up they must be placed in a frame, or under cover, so that they may be easily shaded when they require it. As soon as they have four or six leaves, they may be packed out round the edge of a 4-inch pot, or placed in pots singly, of the size called sixties, (three inches across the top,) in the same kind of compost that we have mentioned. They may be placed again on some hard substance in a frame, because syringing and fumigation may be necessary, in consequence of those sad pests, the red spider and green fly. Many, however, who turn out a number of these greenhouse plants in June, put the seedlings on a shelf in it; nevertheless, if they are placed where there is plenty of air, and a dry bottom, and well attended to, with the watering-pot kept moist but not wet, they will thrive well in a cold frame, or even in the open air. It is not desirable to grow seedlings large until you see what they are, because they require so much more room to winter; but if room be no object, they will be materially strengthened by shifting them to pots a size larger, called forty-eights (four inches and a half over the top.) As soon as the roots begin to mat on the sides of the first pots, the plants will be double the size, and much more handsome for the change. About September, if they have been out of doors, prepare a garden frame or pit for their reception. The ground on which they stand ought to be impervious to wet, which, when they are watered, should run off, and not soak into the ground; for this reason, ashes, gravel, and sand are all bad; they retain the moisture, and throw up a damp exhalation, which causes various evils; damping many off, and rendering all unhealthy. A paved bottom, laid on a slope, (whether it be stones, tiles, slates, or cement,) is the best; place them here with every provision for covering them well against frost and excessive wet, with the glass lights, and for giving them all the air in mild open weather. Upon the least appearance of the enemy they must be fumigated. In the establishments where there are greenhouses, they may be submitted to that, but taking care that they are on shelves near the glass, and where they have plenty of air when the house is open. In the early spring months they will begin to bloom, and you will soon see which are worth propagating, and which are not. If you find any without the notch at the end, this is one point gained. If you see any with petals manifestly wider than the average, even if he has the notch, there is a point gained. If you find any whose petals are wider at the end than in the middle, they indicate improvement in an important point; for, as will be seen by the diagram, the petal in a

really well-made sort will be so, and every approach among seedlings is good. Some, indeed, notwithstanding our aversion to narrow petals, may be of the most scarce and brilliant colours with all the bad qualities of the flower about them; but still colour is a point gained, and therefore, when very beautiful, must be selected; not, however, that all those selected may be worthy of naming and adding to collections. They may be only desirable for some one point or other to be placed among the varieties from which you are going to save the seed. These should be put together in some place by themselves as soon as they are selected. The best way is to get a one-light box, which should be placed full south, to get the sun, and the pots plunged. Here thay may have all the sun while the glass is off, but none while they are covered. As soon as the weather is good, remove the glasses altogether. But as these flowers are blooming, before this would be safe, you must cover of nights, and great frosts and excessive rains; but allow all the air you can in mild days. Here they will be perfect seed, which, as it ripens, must be gathered, dried, and stored, for spring sowing again. In the mean time, any that are considered good enough to propagate and name, should be marked and labelled.

PROPAGATION FROM CUTTINGS.

After the bloom has perfected itself, and decayed, cut down the the stems, stir the earth upon the surface, and throw out the loose portion, then earth it up with compost of the same kind, filling the pot rather full than otherwise; refresh them with a little water, and place them in the frame again; or, if you have none convenient, in a dry and sheltered place in the garden. The growth of a few weeks will enable you to select side shoots, some with roots, and some without roots, and leave only the main plant in the pot, which should be earthed up again, and set by. The shoots which have no roots to them should be stripped of two or three of the bottom leaves, that they may be placed in a pot of the same sort of compost that the plant may have been growing in, with a little sand at top, say a quarter of an inch thick, and covered with a bell glass; or, if there be enough, they may be placed, a dozen or two in a large pan, and a glass, that will fit inside the rim, covered over them. They must never be allowed to dry. The glasses should be occasionally wiped inside. Whether there be one cutting or a dozen, they should be so placed that the glass can be pressed into the sand to keep out the air until they have all struck. They can be always watered without disturbing the glass, if it be properly placed inside the rim, because, by watering over the glass, the whole can be soaked; but the drainage must be good, or they will not thrive. If you happen to have a declining hot-bed in which there remains a little bottom heat, the pan or pots may be placed therein. It will rather hasten the striking. Those side shoots which to them, may be immediately potted into sixty-sized pots, and treated the same as seedlings just potted off. In a few weeks the cuttings will have struck, which will be indicated by their beginning to grow; they may be potted off in sixty-sized pots. Here the treatment is just the same as that directed for seedlings. We may have a few more remarks to make upon this hereafter.

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THE PROPRIETOR'S ACCOUNT OF HIMSELF.

We have every reason to be pleased with the turn the "Midland Florist" has taken; for, although we may not be recognised yet as an old contributor, it will not be difficult to guess who we are and what we are. When the successor of Mr. Wood flared up, and, as we may say, struck for higher wages, we were applied to for advice and assistance, because the loss of the man's services was not all, he threatened an opposition which was to swamp the poor "Midland," and he joined a very formidable man in those days to bring out a rival work. Our readers know that whatever became of the rival the "Midland Florist," far from suffering, rose considerably and has never receded. In January we made a start again, and, perhaps, the work never made a more rapid progress than during the last four months. We hope our old readers are satisfied, and that our increase represents new ones; for, however many friends we may acquire by our present improvements, we should be sorry to lose one of those who have so long stood by the work. We succeeded, at the onset, in engaging some able writers, new to our pages, and we hope those who have so frequently lent a hand in rendering this periodical instructive and amusing, will not cease to contribute the result of their experience. The secretaries to the various local shows of florists' flowers, and our friends among the gooseberry growers, will furnish us with reports, because they are valuable, and no exertions or expense can secure these by any other means. We hope, too, that every reader who knows the value of such a medium in advocating the interest of societies, will not fail to recommend his brother cultivators to become subscribers. If the work is what it should be, he will be doing good service to everybody he induces to take it. Very few periodicals have gone successfully through so many vicissitudes. It was at the time that a man, already over paid, threatened an opposition, unless he had an advance, that "the turn of a straw," so to speak, would have induced the proprietor to give up the work. We induced him to continue it, by meeting his views and pulling it through the difficulty, which, however, was only imaginary, for the readers never deserted it, and their expectations, that a change would be for the better, instead of the worse, were completely realized, while we, knowing the literary character of the leader, and his ignorant and unscrupulous partner, made very light of the opposition, and concluded that if one of them remained long enough, he would condemn the work, or his brother in sin, or both; but we anticipated a disagreement, and it occurred. Hence the famous letters between two antagonists, who accused each other of all manner of discreditable acts, and with all appearance of each having written the truth; however, the London delinquent got pushed out of the work, which we have never heard of since, but which we are told did go on. Those readers, therefore, who were loyal and true to the "Midland Florist," while two rather unscrupulous opponents—one—our old Editor—smarting under the mortification of dismissal, were doing all they could to damage us.

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In danger of stopping again, through the retirement of the late proprietor, to fill a more important station, we accepted the proprietorship and appointed an Editor, in whom the readers have confidence, resolving, however, to contribute more, rather than less, than our usual share; and, we think, we may fairly boast that the "Midland Florist" stands first in literary importance, among the garden periodicals. We are no chickens in gardening; we are able, at any moment, to seize the reins, if our driver get careless, but we see no prospect of that at present; and, as the riders are all used to him, we have good reason to believe that our coach will keep the road, whatever may become of others, if there be any. It is our desire to disappoint one of the meddling pests who has long disgraced Floriculture, and who informed the late proprietor, that, if it came into our hands, he and his friends—in the gambling line we presume, for we never heard of his having any other—would throw it up. Poor man, that is to say poor in morals, if he could but know how he is execrated among honourable florists, and how tainted is the character of any one known to be friendly with him, he would never threaten people, for it makes a wrong impression. Our way is clearly to maintain the interests of floriculture without regard to the pressure from without. We know there are many with whom we are no favourites. We are too plain spoken for some people, but one and all should remember that if we did not believe it to be beneficial to the garden community, we should not sacrifice our own private interests by making enemies of the people who think young or enthusiastic florists are fair game and fail not to make them victims. It would pay us a good deal better to pander to the cupidity of unfair dealers and pocket the profits on their advertisements, than to stand out, as we have done, for thirty-five years, and exposed their plans and purposes. We have saved thousands of pounds to amateur gardeners and country nurserymen by only guarding them against the purchase of worthless flowers; and the "Midland Florist" has nobly done its part towards purging floriculture of cheats and *respectable* imposters. Our Editor is as sound as a roach, and feels none the weaker for being able to fall back upon us in all difficult cases. We trust the readers will not fail to furnish him with reports of local shows, for no energy of his or ours can obtain these without the help of the secretaries.

G. GLENNY.

RAISING THE CALCEOLARIA FROM SEED.

THE seed of the Calceolaria is very small, and the pods should be taken off when turning yellow, and laid to dry in a large sheet of paper, under a hand-glass, that the wind may not disturb it. In the early spring this may be sown thinly in pans, well drained with crocks, and covered with a hand-glass, in the green-house, or under the glass of a garden-frame; when they have attained a sufficient size to handle, they may be picked out into other seed-pans, an inch apart, and allowed to grow until they are large enough to be in each other's way.

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They may then be potted in sixty-sized pots, and placed in a pit or frame, there to grow, under tolerably attentive management as to being kept neither dry nor wet. If the green-fly makes its appearance, they must be fumigated with tobacco smoke, not too strongly, as it has been known to kill all the young shoots. The smoke must be too dense for a man to breathe in; but when the house is tolerably well filled, it must be left there. If, on going into the house, the fly is seen lying about the surface of the soil, they may be syringed at once with clear lukewarm water, about as hot as it would get in a stove; use a fine rose for this, so that it may be applied with some force. If you have shelves near the top of the house that will hold all the plants, you may smoke them enough without leaving the house, as the smoke ascends, and will almost before your eyes disturb the whole community; and a good syringe immediately afterwards, with the fine rose directed straight to the plants, will go at once to the mischief, and wash the principal off. The plants must be examined afterwards to see that none of those which have fallen are alive; for they would soon return to the plant, which would be covered all over in an incredibly short time, only from a few scattered about the pot that may have recovered after the smoke has passed away. If the roots of the pot reach the sides, and begin to mat a little, they may be changed to size forty-eight; and if they should, after that, grow still stronger, they may be once more shifted to size thirty-two, in which they will bloom to great advantage; but few people care to grow seedlings very large until they have seen what kind of properties they possess. When they flower, which will be in spring, you must select your favourites, according as they approach the standard of perfection. They must be free from that indentation which is the ruling fault of many, and which is not tolerable under any circumstances. They must be round in front, and as much inflated as you can select them; not that you can get them as you like; but keep the form of a cherry in your mind, and the nearer they are like that the better. When you have selected your best, put them by themselves for seed. If there should be any very remarkable colour in an ill-shaped one, and it would be a desirable colour in a new and good-shaped one, let it be saved among the others, because, although it will operate against their form, it may give its character to a better form than its own, and so make an advance. The remainder, or discarded ones, may be planted in the borders, or beds, or thrown away, but the selected ones should be placed by themselves, far out of reach of bad ones; and if this cannot be done, it is better to throw all inferior ones away altogether rather than contaminate the seed of the good ones. It is the sowing of seeds among common ones that protracts the advancement of all flowers. Such is the tendency of flowers to go back to the worst, that there is hardly any tolerating a bad variety among a hundred good ones. The sorts which have been selected should be cut down, the earth in the pots stirred at top, and the loose earth thrown out to make room for fresh to be put in; earth them up, and set to grow. In the course of a short time, the plants will spread, and the earth being well up among the base of the leaves, side shoots will spring

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America as the standard of perfection, the committee mean symmetry, as described in the work, an abstract from which, made by the Norwich Floricultural Society, we now give. The National Tulip Society's requirements are thus described.

"The Censors will observe, as the basis of their decisions, *Purity, Symmetry in Form, Petals well defined, Uniformity in size, and perfect Dissimilarity, with good Arrangement.*"

All this is very good, but hardly positive enough. We hope we are not wrong in telling exhibitors that, in the absence of any definition of form, they should look to a generally received authority; at all events, it is the safest way thus to interpret Symmetry of Form.

"PROPERTIES OF THE TULIP.

"From one-third to one-half a hollow globe, when expanded properly; edge smooth and even, petals thick, marking unbroken round the exposed edges of the petals, when expanded, but not to be edged more than half way down the petal; all six petals alike; colours well defined, and the base of the petals forming the bottom of the cup, must be free from the slightest stain; the white or yellow, or any shade between them, must be pure, and all alike."

We hail the schedule as a great advance upon all former ones, and wish it may be met, as it ought to be, by showers, enough to fully justify the increased number of prizes and contributors from all who wish well to pure, honest floriculture. If the nobility and gentry, and, indeed, all who can afford it, could see how gardening improved the moral and social condition of all who indulge in it, they would not fail to give of their abundance towards the funds of those societies which encourage honourable rivalry in the culture of flowers.

PREPARING THE VERBENA FOR EXHIBITION.

THIS popular little flower is every season approaching nearer to the standard of perfection, and is becoming a great favourite at exhibitions, both in pots and in bunches of the cut flowers. There is no plant of which the varieties differ more in habit: some tower up a considerable height, and exhibit robust growth; others creep along the ground, and lie as close as possible, rooting at every joint as they proceed, and covering the ground like a carpet; others, again, take the form of a pretty shrub, and, if well managed, make excellent pot plants. If you desire to exhibit in pots, select those of the most shrubby habit, and as soon as you get your plant, which we will suppose to be fairly rooted, you must take off the top, so as to leave only three or four eyes; or if it be early in the spring—say, January or February—take off the top two or three joints, and strike the cutting for your own plant. As soon as it roots, which will be pretty soon if placed in bottom heat, pinch out the centre eye. This will induce side growth, which may be regulated as you require. If any of the side shoots grow rather vigorously, and go out of bounds, they should be checked; and by

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continuing to check the forwardest until the plant is both the form and the size you require, you may then allow all the ends of the branches to go on to flower, and the plant will be covered; whereas if in the early part of the growth you allow a shoot to go to flower, it spoils the rest of the plant, and you can do nothing with it until it has been shortened, and an entirely new growth has been made. The pots have to be examined as you progress, and as they fill with roots, they are to be changed to larger sizes; thus the growth is excited continuously, so long as you wish to increase the size, because, by nipping off the buds as fast as they appear, the growth is promoted, and the result is, the whole of the plant blooms at once, which, if you are showing in pots, is just what is required.

If you are to show in a stand of cut flowers, by all means plant out in the open ground, and be content to select the particular trusses you are intending to show, and keep off the sun from the time the colour is beginning to show till the day you cut it. All the brilliance of a colour flies in the hot sun. A separate shade for each plant is the best. There is no comparison between a well grown truss in the open ground, in good soil, and the best that can be had from a pot, unless the single truss of blossom is encouraged, and the rest taken away before they grow too much. In fact, if we are to cut flowers, we ought to do with verbenas as we do by pansies: keep striking and putting out young plants in rich ground, that there may be a constant succession of blooms. The plan at some shows is to make large bunches. No justification can be offered for this, except the mercenary one of making a great show. A single truss is all that can show the judges the real merit of the variety or of the growth. Bunches may be packed up from various beds, and fifty pieces may go to make up the bunch; whereas the form of a natural truss is altogether kept from view, and the merit of the plant lost. A single truss deceives nobody; you have not only the shape of the individual flower, but you have also the manner in which the flower lies as it grows; for it must be obvious that the form of a truss is as important as any property of the plant, and that the best-formed individual flower in the kingdom would be useless unless it forms a respectable truss on the plant.

With regard to the arrangement of the flowers for show, take especial care to be uniform: place darks and lights opposite each other, but with one different between; lights at all four corners, darks between them; or darks at all four corners, and lights between them. Let not one end of the collection be light and the other dark, for it is in the worst possible taste, and leads to a bad result.

LAPAGERIA ROSEA.

Lapageria Rosea is a most beautiful twiner, growing many feet in height, and having round branching stems. These bear alternate stalked leathery leaves, of an ovate lanceslate acuminated figure having a smooth shining surface, marked longitudinally, with five

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nerves, or ribs, and furnished with reticulated veins between the ribs. The flowers grow singly from the axils of the leaves, on stalks, which exceed in length the stalks of the leaves. They are handsome, lily-like, pendulous, about three inches long, and expanding at the mouth to about two inches and a half, the form of the expanded flower being bell-shaped, a little compressed; the flowers are formed of six petals or flower leaves, of which the three exterior ones are somewhat keeled at the base, and the inner three somewhat clawed; the color is a deep rose, internally spotted with white, the three interior petals being broader, as well as more thickly spotted than the others. Ruiz and Pavon describe the colour of the flowers, as varying from rose to rose-crimson. Veitch and Son had early specimens of the plant, which proves a very beautiful climber, and a first-rate ornament to the conservatory.

HINTS UPON LANDSCAPE GARDENING.

It has been observed by some writers, that it is impossible to reduce this to rule; that it must be governed by the taste of the architect, and cannot be taught. We will concede the point that no set of rules can apply equally to all places, and that the features of the ground, the nature of the views, the extent of the arena, the presence or absence of water, trees, hills, dales, rocks, swamps, and other features, must dictate to a landscape gardener a good deal of his work; but there are certain rules which can hardly be departed from under any circumstances, and a good deal of useful instruction may be imparted in writing. Nature is our great teacher in this branch of the profession. When we see a beautiful landscape, and are smitten with the harmony of the picture, we may safely study it as a lesson. Is there a straight road? No. Is there anything formal? No. Is there a square pond, or lake, or river? No. If there be one of these, the eye is offended; if it be not the artificial work of man's hands, it may be wonderful, but certainly not pleasing; the charm would be broken. We find in all pleasing landscapes a total absence of all formality, and the gardener's task is to imitate the beauties, and to bring into his work as many of the best features as the nature of the ground he has to work on will admit. If the ground be undulating or flat, there must be no sharp turns. A road must be laid down in graceful sweeps; hard lines are always unpleasant to the eye, and must be avoided. Abrupt turnings and elbows are equally objectionable. The same applies to rivers or rivulets which run through grounds; anything like a straight margin is a complete eyesore; angles are as bad, and whenever such occur, and cannot be altered, they must be concealed. Roads, too, should be, as far as it can be contrived, level, and in undulating ground, the rising, unless very gentle, must be lowered, and each side eased off to a gentle slope on the parts next the cutting. All these things are to be attended to as so many rules, and all deviations must be exceptions forced on the gardener; and his study must then be how they can best be hidden by planting, or reconciled by other

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schemes. It is rarely that the landscape gardener has to deal with barren ground; there is usually a quantity of trees of various heights and kinds. It must be his study to appropriate these to his design, or, at least, some of them. If, however, there be any formality or stiffness in their situations, which is frequently the case if he has to take in fields that have been hedged and timbered, a sufficient number must be taken down to break the line, and on grubbing of hedges all the common stuff must be destroyed first, leaving any portions that have grown up at all ornamental until a later period of his work; then he may, if he feels inclined, work to them; for it must not be forgotten, that it takes many years to equal things that have grown up well. Not that he is to sacrifice his plan to such an object, but that he must not hastily destroy what may be found highly useful. If a man has an unconditional instruction to form a garden upon his own plan, and to pay no regard to anything that is standing, he will be less inclined to sacrifice any rule than to sacrifice whatever may be there; but there is nevertheless, as much art in adapting a plan to circumstances, as in carrying out a perfect design, and perhaps more; but, as a matter of cost, some hundreds of pounds may often be saved by a little consideration in planning the original design, and this should never be lost sight of, for very costly and extensive work may be rendered necessary, or be avoided, if all things are taken into account before we make up our mind to the plan we intend to carry out. GLENNY.

RAMBLING NOTES ON FLOWERS.

THERE has been a considerable advance in the progress of some flowers, while others have remained stationary, if not altogether receded; that is to say, been neglected. Suppose we begin at the rose. We may be told that the novelties of the year are by no means numerous; but if it were shown that there had not been a single new variety, we should nevertheless say it had greatly advanced, inasmuch as, if nothing good has been added, many bad ones have been rejected; the properties are better understood; the points which add value to them are more highly appreciated, and there cannot be a better preparation for a permanent advance. But there are new ones to let out, and others under proof: that is to say, possessed by the dealers, who will grow them a season, with a view of proving their qualities. The summer roses; that is to say, the numerous varieties which flower in June, or thereabouts, and give us their flowers for a month, are no longer valued; so many magnificent flowers which equal and surpass the best of the summer varieties may be now selected from the perpetuals and continuous bloomers, that nobody of taste cares to encumber the ground with the sorts which flower but one month in the year. Dealers are obliged to keep them all, because they are asked for; but the best of the rose, nurserymen discourage the sale of the summer varieties altogether, and if any one were to order a hundred, and leave it to the choice of the vender, he would select such as bloom

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three-fourths of the summer. Of course, there are exceptions. Those who provide themselves with a stock of everything, would, perhaps, let the most conspicuous varieties go, without considering the one great object—a prolongation of the bloom. Again, there are persons who, in laying themselves out for an exhibition three or four times a-year, will procure all the best formed flower, and summer roses will afford them great help in June; for even the old cabbage would be desirable in a collection of fifty in June, and many others would be important additions. At the Hammersmith Nursery, they reject nearly all the flimsy-petalled kinds, and acknowledge thickness of petal to be a most important *desideratum*. This example must be followed; but some of the catalogues are very faulty in this particular, and contain many varieties which, as described, would tempt, and as surely disappoint, those unacquainted with the qualites of the things they order. The rose, which formerly occupied the undivided attention of a few leading men, now becomes a most important portion of the stock in all respectable nurseries. At the late Mr. Girling's, Stowmarket, this queen of flowers was grown in high perfection, and immensely long walks, neatly formed, and graced on each side with a double row, the front dwarf or half standards, and the back whole standards, took up more than two thousand of the finest sorts; these now pass into other hands. It is, however, very curious to see most of those who have adopted the rose as a leading article, differing so much in their estimate of the best; but certain it is that most of them, after we mention about fifty, which all appear to like, have a different set of favourites. We cannot too strongly impress on all who have gardens, to first secure all the distinct varieties of the China and hybrid China sort with good flowers, and make up with such others as are continuous in their bloom, or, at least, have two or three seasons of flowering; and it should be recollected, that a garden without a collection of roses, is a complete anomaly; it is a house without a chimney; it is a dining-table covered with plates and dishes, but nothing to eat. The rose is the finest of all florists' flowers, with the richest qualities, the greatest contrasts, the most lasting beauty, and is withal the greatest favourite among all classes, even the most indifferent. The tulip has moved a little in the country; but costly as it is to keep up a fine collection, and seldom as it is that the new ones come to any fine standard, the progress is slow; and this sluggishness arises, for the most part, from the indifferent judgment and worse taste of those who will write about them. It will hardly be believed, that, in a work of some pretence, but fortunately of no circulation, we have lists of flowers recommended that no honest florist could conscientiously pass off to the most uninformed Tyro; but if, unfortunately, the list should fall into the hands of an ignorant beginner, and he should procure those recommended, he would become disgusted with the flowers altogether, and come to the well-founded conclusion, that if they were good, the tulip was unworthy his notice. The proportions of the tulip are at last definitively settled, the proportion of shape to be from a third to half of a hollow ball; less than the third would be too shallow, while more than the

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half would be too deep, but all the shades between would be perfection. · It was endeavoured to be shown by diagrams and specious arguments that the third was wrong, and most disingenuously the same circle was used for the third as was used for the half, by which the third was made to look smaller than the half, whereas the same flower which forms a fine half, may be expanded wider until it forms a third, and every grade of the expansion is equally beautiful, for what it loses in depth it gains in size, and down to one-third it is all that we can desire. Nay, a flower that will not expand to the third without quartering (or dividing between the leaves,) is comparatively worthless; and we have now the acknowledged authority of every grower in the kingdom whose opinion is worth recording, that the question is settled. Such being the case, we leave all those who claim to have had anything to do from first to last with settling the form at any portion of a circle, no matter what, to prove where and when they first wrote it, or be satisfied that they are set down as pretenders. The petunia, though improving, is not a general favorite. It is a difficult thing to exhibit; a single flower is hardly enough to show, and a plant is too weedy, nor are there enough distinct varieties to make a stand of single flowers attractive; but after all, it should be remembered that its value arises from its habit as much as its flowers; dwarfness is a great point, abundance of bloom, thickness of corolla, roundness of flower, brightness of colour. Too many are the reverse of all this: they are straggling, weedy, untidy looking things, and only tolerable while small. They have greatly improved in the form and texture of their flowers, and if some attention be paid now to the most dwarf varieties they will be greatly increased in value. The carnation and picotee have been gradually improving, especially the latter. The feature most advanced is the smoothness of edge. Some of the favorite varieties were deeply serrated; these are almost discarded, for there are many as good in other respects and quite smooth. The only check to a more general competition at shows is the great facility for showing collected blossoms, and beating gentlemen with other people's flowers. It is a sad pity, but there is no denying the fact, that unfair showing has driven many enthusiastic exhibitors from the field; they have retired because they stand no chance against collected blooms, and they have honorable notions that preclude them from adopting so mean a course. Cases of this kind have been brought under our notice, but we hope the slightest reference to the subject will put on their guard those who have been acting unfairly, and prevent the necessity of further notice. The dahlia has improved. But the old metropolitan test of six blooms has long been found inconvenient for the raisers of flowers. though very useful to the public. The change has been unfortunate for the very persons who caused the alteration. The public considered six flowers a tolerable security for the average certainty of a flower, but the best growers and the best judges think three blooms no evidence at all, because three are as easily cut as one from thirty uncertain plants, and they naturally doubt the quality of even the best. Some growers showed many blooms as well a

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the three required; but this opened the eyes of the public still more to the probable uncertainty and worthlessness of all those belonging to the same persons not so supported. For instance, one grower shows five or six varieties, three blooms of each, but of one of these he shows a dozen flowers besides; the conclusion naturally drawn is, that the one so fully exhibited is at least a constant flower, with all its deficiencies, and that all the others are uncertain. The dahlia trade suffers for this.

The pansy may now be weeded of many sorts that have nearly the worst faults, small centres almost all occupied with the eye and the rays, which break into the margin. A flower of this description looks heavy as compared with those which have a good field of white or yellow clear all round the extreme points of the rays. We do hope that judges will begin to exercise a sound discretion and throw out such heavy looking varieties as we have seen of late. A run petal in a pink is fatal to a stand; nobody tries to save it; and the same penalty should be imposed for an eye when its rays break through the field of yellow or white into the margin; there are plenty without this fault. It is the fashion just now to treat hollyhocks as show flowers. Mr. Chater, of Saffron Walden, also advertises a number, and it must be conceded that he has far outshone all who had pretended to raise them. We wish we could see the ranunculus and the auricula cultivated with the spirit formerly evinced, when a thousand little gardens, now no more, occupied Bethnal-green, Mile-end, and indeed all the suburbs now covered with densely crowded houses; but those who could and did grow both well were driven from their plots of ground, and, comparatively, both flowers are neglected, although the auricula is the most delicate, and the ranunculus the most perfect, of all our pets. Floriculture has suffered more from evicted tenants of gardens being forced to discontinue growing, than anybody not well acquainted with the gardens of Bethnal-green could imagine; thousands of growers have no longer a rod of ground to cultivate, and to growers of that class we owe many of our most beautiful varieties of florists' flowers. Those who grow flowers now must get further from London, and they comprise a higher if not better class than the humble mechanics and artisans whose industry and perseverance accomplished so much in the earlier days of floriculture. The geranium is of later adoption as a florist's flower. Its properties were little understood until the publication of the particulars a few years since; brilliancy of color was the only point looked after; shape was altogether lost sight of, and the notion of the bloom being round was not thought of; but now that the properties of flowers are in every body's hands, other works go elaborately into the subject, giving the same points over again, as if they had never been mentioned; but inasmuch as none of them contradict the original, we shall leave the question of dates to speak for themselves. We are not quite sure that the world is any wiser for these repetitions, but that is not our business. These things would be all better understood if there were social meetings of the persons interested, where the flowers could be seen and talked of; and we are not sorry that such meetings are contemplated, for there is as much pleasure

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in talking of flowers as there is in growing them, or nearly so; besides which, we can enjoy the conversation in the evening as much as we enjoy the culture by daylight. The great nurseries of the science were the numerous societies of humble but enthusiastic amateurs who congregated to club small sums for prizes once a-year; but, from the cause already mentioned, many are discontinued. The most successful attempt that has ever been made to bring those interested in gardening together, is the establishment of the Central Horticultural Society, under the Presidency of Geo. Gordon, Esq., the late Superintendent of the Horticultural Gardens at Chiswick; they meet at the Hungerford Hotel, and invite amateurs and gentlemen's gardeners only to become members, the meetings are the first and third Tuesdays in the month, as mentioned in the "Midland Florist Almanack," which we hope is in everybody's hands.

We have no dislike to such societies, but they must be above suspicion of ignorance, or favoritism or design, to have any weight with the public. A society of amateurs and gentlemen's gardeners bids fair to lead to great results. Amateurs are the persons interested in the proper estimation of a flower, and are very likely to put a complete check upon the issue of worthless varieties, by establishing a disinterested test. The enrolling of all amateurs and gentlemen's gardeners in a society from which there is nobody to get the pickings, and to which the subscription is merely nominal, is the work now in happy progress. As, however, we shall for the present year be the organ of the Florists of Great Britain, Ireland, and the British Colonies, we shall be able to do much more than we have done; and if we be not all that a large class of florists may wish, we shall communicate all the information they can want.

If the fact of having obtained particular notice and distinction at the principal exhibitions had any reference whatever to the merits of the subjects, we should have given a list of the prizes awarded during the year; but as four-fifths of the subjects that have obtained prizes will never be heard of after the first sale is forced by means of the prizes or certificates awarded, it would be only giving currency and influence to the awards to notice them at all. Perhaps the shows never gave so much cause for dissatisfaction; this will give rise to new societies and the abandonment of old ones, and this will never be cured without a demonstration of sound judgment on the part of societies by the employment of acknowledged judges: The shows of plants are too often lotteries, and, until plants are grown naturally, will continue so; those who can mechanically grow a geranium, or a rose, or any other plant with the most shoots, and place wooden or other supporters with the greatest dexterity, supersede all good plant growing, give bunglers the preference, and place bad, ill-habited plants over those that will grow well without any mechanical aid. Upon the whole, there is a good deal to undo, as well as much to do, to bring up floriculture to the place it once held. The only subject upon which we can really congratulate our floral friends, is the fact that the continental florists have not only adopted the English standard for florists' flowers, but that they have greatly added to our very best varieties of many different species.

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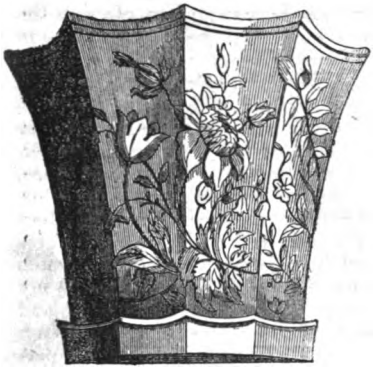

FANCY FLOWER POTS.

These should never be used to grow plants in, but to place the pots they have been grown in within the one that is ornamented. We are not going to find fault with the material of which the fancy article is composed, because that would admit of discussion; and we can remember a very long discussion, or rather controversy, about glazed and unglazed material, and after a great deal of space had been wasted, in about as profitable a dispute as the material of the moon would be, a theorist finished it up by the discovery that he who could not grow plants in a glazed pot was no gardener. This was inferring that one was as good as the other, whereas it is as clear as the sun at noon-day that the material that absorbs moisture must be preferable. We are not going to waste time and space upon that point; our objections arise from this: with all the care a gardener can give he is liable to break a pot now and then, and if it be a fancy one instead of a common one it is a very much greater loss; again, if the plant be grown in a fancy pot the one plant is, good or bad, the one to show off with, whereas if he can pick over all his plants of a particular kind, he can take the best and put it in with its pot all complete, and so set off his fancy pots with the finest of his plants. Further, when the plants are past their prime he has only to lift them out and put in others, so that without caring whether the material of the pot is better or worse, whether it be cast iron, stone, clay, or china, we say distinctly, it is better never to grow the plants in the pots they are to show off in, whether it be in the drawing-room or the conservatory. Another point is worth notice, the soil and frequent watering will discolor all clay pots, nothing that is unglazed can stand frequent watering; cast iron is not free, for when painted the least rub or blow removes the paint from a spot, and rust follows. If we were to grow things in fancy pots, how many would be required to replace plants when out of bloom. Our conclusion is, that fancy pots should be purchased in sets to suit the windows, or stands, or places they are to furnish, and that the plants intended for them should be grown in

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pots that will just fit inside; these can be changed as often as the owner pleases, so as to keep them always furnished with plants in perfection. To be used in this way fancy pots are very gay subjects, and it matters not how rich or costly they are. One set, whether it be three, four, or as many as that for each window or stand, once purchased, they may be used without detriment for years, no matter whether they be china, glass, colored clay, bronze, or iron. The specimens of which we give sketches were exhibited at the Crystal Palace, in various materials, and are only a portion of a large collection, but they give a tolerable idea of elaborate workmanship and excellent taste. There were some designed for suspending, but we will give them on another occasion; the object here is more to show how such pots should be used than to illustrate them, although we have many sketches, and may hereafter say a few words on suspended plants and their culture. It may be worth mentioning, that BALL, of Sunderland, the maker of the square seed pans, and PHILLIPS, of Weston-super-Mare have taken to the manufacture of fancy pots for windows. ROSHER & COMPANY, of Holland Street, Blackfriars, have invented a very fancy article for window culture: a sort of enamel of brilliant colors and figures, with a zinc trough for mould, but even these are far better furnished with plants in their own pots. RANSOME'S silicious stone window boxes, are made to hold loam enough for plants, but we use plants in pots for even these; there is so much more opportunity for display and so little trouble to what there are when plants grow in the box itself.

UNION IS STRENGTH.

THE Florists of England would be the most influential class in the country if they were but united, but at present they form as many parties as there are colors with their floral favorites. When we consider that there can be but one object, the divisions among those who follow it are the more extraordinary; we may be told that buyers and sellers have different interests, we can only regret it, because if both mean right, each is served; if A likes a flower better than he likes the money wanted for it, he is gratified by the purchase; and if B likes the money he asks for it, better than he likes the flower, he also is well pleased with the transfer. Both are satisfied, we cannot therefore see that their interests are necessarily opposed. It is only when B makes A believe that a worthless thing is worth a good deal of money, and B. gives him all he asks, that any wrong is done, and the buyer finds he has been swindled; we may be told that rivals in trade, and competitors at shows, have opposing interests, but those are imaginary. The rivalry in trade ought to create a determination to deserve the public favor, and competition at shows ought, and with good men does, excite emulation. Nevertheless, it is true, that among some men it engenders all the bad passions. There is scarcely a society in which there are not two parties, and although a little opposition does good when it once passes an honest difference of opinion, and obedience to

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the majority, it becomes "A house divided against itself," and "cannot stand." This has been the fate of many societies. But, surely "it is never too late to mend." If the Florists of England would take as much pains to please, as they do to tease each other, things would be very different. Why should not the eyes of the florist in every part of England scan the same pages the first of every month to see what is doing all over the kingdom. A man who desires to make a fact known, or publish an opinion to all his brother cultivators, and forward it to the "Midland Florist" for the following month, sends it forth to hundreds on the continent, and in America as well as to the writer's own countrymen in Britain. And why should it not be so? At all events, those who mean well may form a large party, and if those who do not were left out, the loss would be trifling, the great body of the trade would come into the ranks, and surely it would answer their purpose. They would be content with the trade they have and care little for the good or ill that comes from publicity; but when they consider that they have been victimized now and then as much as amateurs, and might by supporting a work like this always avoid it, they might surely afford three or four shillings a-year as subscribers; and assuredly they would reap advantages far more valuable than the money would be in their pockets. However, it is before them, they may do much towards concentrating the good if they could not convert the bad, and that would be of service; they might cement friendships at home if they could not command union abroad; and if each did this, the floral community would be as it ought to be, one of the most influential bodies in Great Britain, while the good effects would extend to all parts of the world in which floriculture has taken root.

FLORAL HINTS.

Mr. Morse of Dursley, the only nurseryman that makes a catalogue of cuttings, and sends out many thousands by post, gives us the following names of a few popular flowers:—

Fuchsias, Dark.—Crown Jewel, La Crinoline, Prince Frederick of Prussia, Magic Flute, Senator.

Light Fuchsias.—Wiltshire Lass, Guiding Star, Flower of France, Butterfly (White Corolla).

Verbenas.

Light Blue or Lilac.—Compact, Lord Canning, Delicatissima, Blue Bonnet.

Dark Blue.—Leviathan, Thetis, Mrs. Moore, Madame Ruistou.

Crimson.—Novelty, Ajax, Titian, Admiral Dundas.

Purple.—Nestor, Lord Elgin, James Stamps, King of Verbenas.

Pink.—Cupid, Lady Bridport, Ida, Undine.

Rose.—Lady Adair, Mrs. Spencer, Great Eastern, The Bride.

Striped.—Striata Perfecta, Mons. Richalet, Madame Loudier, Madame Gonaud.

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White.—Mrs. Halford, Snowflake, Belle de Bordeleau.
Scarlet.—Firefly, Diadem, Defiance, Mrs. Woodroffe.
Blush, with colored eyes.—Reine des Amazons, Angelina, Venus, Earl of Shaftesbury.

DAHLIAS.

You must not omit the following:—George Elliott, purple (new); Chairman, golden buff; Emperor, bright crimson; Sir George Douglas, yellow liped scarlet (new); Golden Dorcas, yellow; Lady D. Pennant, yellow (new); Mrs. Wellesley Pigot, white (new); Lilac Queen, lilac (new); Rose Bud, rose; Leonard, liped fancy.

A FEW WORDS ON THE CROCUS.

To Grow for Increase.—Plant the finest bulbs that can be had, six inches apart every way, and four inches deep, a clear three inches of soil above the crown. They will do best in light sandy loam, and enriched by the addition of half its bulk of cow-dung, or the soil from cut turves, rotted; they require neither protection nor water. They will come up in February or March of most seasons, bloom abundantly, and seed freely. At the autumn of the year, when the grass has turned off yellow, the pods of seeds may be gathered in considerable quantities. The bulbs are not to be disturbed until the leaves have quite decayed, when they may be dug up, and the largest and finest are marketable; the others may be replaced in the ground, or be got rid of, as the case may be; but for those who want increase, the longer they are planted, the more full-sized bulbs will be taken up. The question as to the depth of the bed has been variously answered by different writers; but if there be a foot of good soil, they require no more, so that there is nothing absolutely poisonous under it. In this little routine of planting in October, or even earlier, and taking up in August, or even later, consists all that can be done for the Crocus.

Raising from Seeds.—A bed, prepared with a barrowful of the loam of rotted turves, to half a barrowful of cow-dung, should be levelled and raked smooth on the surface in October. The seeds should be very thinly sown all over the bed, and carefully raked in so as to be covered; but it is still better to sift some of the compost through a fine sieve upon the seed, so as to cover it a good quarter of an inch. In the spring, if not before, this seed will come up, and all that is required then is to carefully remove all the weeds; this can only be safely done by hand, but if it be not done while the seedlings are young, the weeds will so completely rob the little plants of the required nourishment, that there will be no hope of their recovering the check; by early hand-weeding everything is removed before it is large enough to do mischief. Vigilance must be continued all the year, so that no weeds be allowed for an unnecessary day to keep possession of the ground; and yet, with all the care and cleanliness that can be exercised, crop after crop of weeds will come up, and if they

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were allowed once to get a-head, their roots would tangle round the small bulbs, and drag them out of the ground. These, when they have died down, are to have half-an-inch of good soil, such as the bed is made of, covered over the surface, and again they will come up the second spring. At the end of this season they may be carefully taken up and planted in a fresh ground, composed of the same materials; or if there be only one bed that can be appropriated, dig it well, to turn bottom to top, and carefully replant all the bulbs, two inches deep, and three inches apart. If there should be any very severe frost, a little litter of any kind thrown over the bed is useful; not because the frost hurts the plants, but because the freezing and thawing of the soil often makes it rotten, and it actually displaces the bulbs, and at best leaves them among spongy, hollow, and disturbed soil, and often breaks the fibres of the bulb. This third season they may be taken up and replanted in fresh ground as before; and this time they will be best in drills drawn three inches deep, and six inches from drill to drill; place the bulbs three or four inches apart, and when you cover in the earth, draw up the soil so as to ensure a good three inches of soil above the crowns. The greater part will bloom this fourth season, and the first thing to do will be to select the good ones that you mean to keep from such as you will despise. Mark every one that forms a nice round hollow cup, or something approaching to it, with broad petals to touch one another the whole length, round ended and thick, for these are all necessary to make one worth saving at all. Put labels to them, describing them, so that you cannot make a mistake in taking them up; and at taking up time, go to the marked ones first, and having secured them with their offsets and increase, take up the remainder all in one basket, or bag, for you have no interest in saving them separately; but as it may be that they do not all bloom, recollect that the unbloomed ones should be separately saved, to be grown till they do flower.

HINTS ABOUT PLANTS IN POTS.

Nothing is more conducive to health than plenty of room; half the plants that are spoiled in a greenhouse, more than half of the long-legged, ugly, uncouth specimens that we see about, are the result of over crowding. It causes the leaves to fall from the lower part of the plants, the under branches to decay, and the tops to draw up into an ungainly form; and it is not easy to recover a specimen that has once gone wrong in this direction. Avoid over crowding them above all things; rather throw half the plants away, and take care of the rest, than, by cramming too many into a place, spoil all. When it is done, and the forms of the plants destroyed, the only way to recover them is to cut them down very close for the chance of their breaking out at the bottom, or to cut off the side branches. and see if they can be made into well-formed standards; but it is only a few kinds of plants that make good standards, and we should not be tempted to try the

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experiment with subjects that will form good heads. Sometimes, in spite of all our efforts, the frost will lay hold of plants; when this is the case, syringe them well all over the foliage, and cover them up close, so that the sun shall on no account reach them. In most cases this will thaw them gently, and save them, and nothing else can. We have seen a whole pit full of heaths frozen through leaving off the covering, and hanging their young shoots down as if they wanted water. They have been syringed all over their foliage, the lights all closed and closely matted up till the next day, and have been perfectly recovered. Now, although the frost would not have killed them, every shoot would have been lost, if they had been thawed by the sun, or warm wind. We might mention twenty other instances of the efficacy of syringing or watering frozen plants all over the foliage, and covering up close from wind and sun, and it is the only thing we can recommend when anything has become frosted. The best rules, then, for the preservation of plants in pots are, first, to abstain from watering as much as possible; second, to give plenty of room; third, to cover from the hot spring sun as carefully as from the winter frosts; fourth, to plunge all pots that have to be exposed to the open air, or slight covering; fifth, to avoid opening all houses, pits and frames, in wet and gloomy days, and generally to take pains to keep all plants as much as possible at rest. A little attention to these rules will assist greatly in the preservation of half-hardy and greenhouse plants through very formidable winters, and keep them healthy and ready for a sound spring and summer growth.

THE CAMELLIA HOUSE.

A COMMON greenhouse with a north or east aspect will do for camellias, though we prefer the south for everything, and a shade to counteract the influence of the sun upon those subjects which do not require it; however, there is less trouble when the aspect is the other way. When it is time to remove the camellias to the conservatory, or the house in which they are to flower, they must be taken up singly, and examined, first, as to the drainage, next as to the form and position of the branches, to see if any should be taken off, or shortened or trimmed in any way. Also some of the branches may require tying a little, one way or the other, to help the shape of the shrub or plant. The surface of the soil may be stirred as low down as it can be done without disturbing the fibres, and all that can be loosened may be thrown out, and fresh compost be put on the top to fill up the pots, which should be cleaned from any mud or dirt that has accumulated on them while out of doors. They may then be placed in the house, giving such ample room, that they shall not only not touch any other plant, but also have plenty of free air; because there is no longer any doubt that to the crowding of the plants in their winter quarters half the evils that assail them may be attributed. They should also be occasionally turned round, to preven

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their growing to one-sided specimens, which they soon would if one side only were always to the light. There are many persons who prefer pits to greenhouses for winter quarters; but they are so ornamental, even without their bloom, that most people want them in their greenhouses and conservatories for the sake of their general appearance; and, again, it hastens their bloom. If they are wintered in pits, it is better to trust entirely to the covering against frost rather than risk fire heat of any kind; but the covering must be effectual, that is to say, thick enough to prevent the frost penetrating. As the buds begin to burst and show colour, they should be removed to where they are to bloom, whether it be the drawing-room, the conservatory, greenhouse, or other place; and this in a mixed collection will be from November till April, according to the temperature in which they are kept from the time of first housing them. Nothing can be easier than to keep up a respectable bloom through these months. In general it will be found that at the end of the autumn, when they have to be housed, there are some much forwarder than others, without any pains having been taken to make them so; in this case you you may make up your mind either to bring them into bloom all together, by placing the forwardest in cold pits, where they will be retarded, and the backward ones into the warmer houses, to bring them forward; or they may be all served alike, and so keep up the long succession of bloom; or they may be still widened in the period of their bloom by putting some of the forwardest where they will be still hastened, and so obtain bloom much earlier than they would come in the ordinary way, although set and swelled earlier.

The varieties of camellia amount to several hundreds, but few have attained anything like perfection. The altheafloras are confused in the centre; the anemonefloras are little or no better. The only sorts that are at all worthy of cultivation are those which are improvements upon the double white and double red, those of which the petals are symmetrical, whole upon the edge, high in the middle, and approaching to a circular outline. Nevertheless, the plant is in itself so handsome, that even a bad flower is passable, and will always find its admirers. Colour is a grand object. Stripes and blotches are run after; and these characteristics carry some through a large circle of buyers when they have not any quality but that to save them. Tricolor, a semi-double; doncklaari, a semi-double; and many others, which have neither form nor substance to recommend them, have nevertheless been purchased at a large price and in great numbers. They look rich as the flower first bursts through its green covering, but are nothing as soon as their flowers are fully developed.

WRITERS ON GARDENING.

When gardeners attempt to enlighten each other upon the subject of any particular practice, they should bear in mind the fact, that their fellow-craftsmen have been educated in the same way as themselves,

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and that they do not require to be taught again. In an expensive garden periodical, therefore, it seems out of place to read one paper upon the treatment of brocoli, and another upon growing the violet; one long yarn, as the sailors say, about growing heaths, and another about vines, when all these things have been taught to perfection by authors far better versed in practice, and better able to write. It is not so in a work designed for the multitude of amateurs, and working or under-gardeners; the former, anxious to learn anything as easily as possible, because they know but little, the other equally desirous to profit by reading what head-gardeners too often keep them ignorant of, for interested purposes. We are anxious to give everything plainly, beginning at the beginning, taking the inexperienced amateur through the most level path, and introducing him to the science of gardening at the very first steps. Ths journeyman-gardener will find useful hints, which will forward him in his profession, and the finished gardener may learn something about the culture of Florists' flowers which has not hitherto been attended to, even by the heads of the profession, as we should like to see it. We wish, indeed, that head-gardeners were more encouraged than they are in the culture of the finer productions, instead of being cramped for the means of doing justice even to common ones.

VARIEGATED LEAVES.

VARIOUS are the speculations on the production of this curious feature in plants: some will pretend to find a cause in sickness; but we are not disposed to follow speculation. We may quite as sensibly attribute the notches and serratures of some foliage to blights in their parts, as to attribute the colour or want of colour to ill-health. It is quite certain that trees will occasionally throw out branches with variegated leaves, and that cuttings or grafts from such parts will perpetuate the character. But there are hollies variegated in many different ways; some have the white or yellow in the middle, some on the edges or margins; and these are as constant as need be, thousands upon thousands of all the different varieties being propagated every year without their running away from their sorts. Camellias will sometimes throw out a branch with variegated or blotched leaves, but particularly camellia reticula. We have seen these variegated or blotched parts worked, and the plant continue blotched, nor does the plant indicate weakness or bad health, or give a less or poorer flower. These sports of nature may be caused by some known agency, but we have seen nothing written, and heard nothing said, that brought us to any rational conclusion except contrary to that which writers have attempted to prove. It would be quite as profitable to inquire into the different colours of flowers and their causes, the different shapes of fruit and the causes, the different nature of plants and the causes, as it is to waste time, and speculate on the causes of variegation in the colours of leaves. The great Giver of all good things has created plant

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and animals of endless variety of forms. Every day adds to the number of discovered plants, and nobody doubts their origin. They are different from those we already have, and excite admiration without setting us all wondering about what caused the difference. We hold variegated leaves to be as distinct in their nature as any other difference that may be discovered, but no tribe is more distinguished in this particular than the holly, and the variegated leaved sorts grow quite as vigorously as the same sorts plain. The seeds of the variegated kinds, however, bring only the common sort in a general way, the same as apple pips bring the crab stock; anything better are exceptions and not the rule. The best way to treat any desirable sport of nature is to graft or bud it directly. In this way some variegated subjects have been obtained, but the regularity and uniformity of the variegated geraniums, hollies, rhododendrons, and their vigorous and healthy growth, put all the speculations about sickness being the cause completely on one side. The changes in the colors of flowers might just as sensibly be attributed to sickness.

NOTES ON THE DAHLIA.

We see in the leading dahlia-growers' gardens, in the blooming season, an immense number of shades which completely destroy the beauty of the scene, but which are considered necessary for the production of first-rate flowers. Little wooden tables, just large enough to hold a pot, are placed by the side of the plant. These tables have holes in the middle, and a slit from one side to the centre, for the purpose of passing the stem of the promising bud to the centre, where it is fixed, as it were by filling the slit and round the stem under the bud. Thus is formed a flat table, and the bud fixed in the centre, just enough above to allow of its full development. The cover to this bud should be flat on the edge, so that on being placed on the table no earwig can get under. This is, in truth, the greatest service that the cover renders; but even this is at the cost of another advantage: the flower is deprived of the night air, which in August, and until the frosts sets in a little, is most beneficial. We have seen covers like iron mouse-traps, formed of closely woven wire, which keep out the vermin without excluding air; and covers like flower-pots without a bottom, but a groove round, so that pieces of glass are dropped on to admit light without losing the benefit of air. Perhaps the best improvement would be to substitute closely-woven wire for the glass, because this would admit light and air and still exclude the vermin, which in an hour would destroy a bloom; and closely-wove wire would also keep off the tarnishing heat of the sun. But there are several considerations lost sight of by some of the best, or at least, the most popular growers. By excluding the air and light, the colours of edged flowers are almost destroyed. This changes a blush white to a clear white, and may so far induce a change they require; but some are so altered for the worse by the exclusion of light and air, that a flower that is

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absolutely beautiful in its natural colours, becomes an undefined and anything but pretty specimen under the present treatment. Yellows become paler, whites become purer, and all the brilliant colours lose a portion of their brightness. To young beginners, we would advise the constant and unremitting destruction of the earwig from the moment the plants are put out; it is worth all the trouble to be able to have the flowers more exposed. Flowers which have the air and light are brighter, and thrive a great deal better. All that is required is to pick off superfluous buds, and to stop the growing portions that are beyond the blooms selected for growth, for they detract from the perfection of the flower.

ON PLANTING OUT POTTED PLANTS.

The common practice of putting out the coniferæ, and many other plants usually kept potted in nursery stock, with the ball whole just as they turn out from the pots, has been often mischievous, and sometimes fatal. Indeed, soon or late potted plants put out with the balls entire, grow weakly, or completely choke themselves. The roots as may be seen when confined in a small pot, turn round and round inside the pot, and having once taken this direction, the portions of root that are so turned round the collar of the plant swell very much, and so completely confine the collar that they prevent its enlarging, while the roots spread around and furnish their thicker bases with the nourishment sufficient for the growth of both themselves and the tree; and until the roots grow thick enough to pinch on the trunk and prevent its enlarging, all goes well; but so soon as that is confined by the still swelling but entangled and entwined root, the tree becomes weakly, and at length fairly blows down, fractured at the collar, round which the roots have formed a confining ring, as obdurate as iron, and the trunk of a few inches diameter is seen to have been held by a collar of a fourth of the thickness. Avoid, therefore, all pot-bound plants if you can; but if you are obliged to use such, soak the ball in water, wash out the soil, disentangle the roots with as little fracture as possible, spread them out all round, as near the surface as you well can to be covered at all, and after treading in firmly, put stakes to them, that may not be disturbed. All the expensive kinds of coniferæ should be attended to especially, or they cannot succeed long together; we prefer those from the open ground to any that have been long in pots, for unless they are shifted often enough to prevent the roots from curling round and entangling themselves round the collar, they want all the care we have mentioned to make them succeed.

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TULIP SALES THIS MONTH.

THE only sales worth attending the ensuing bloom are those advertised in our present number; complaints, however, meet us from all parts of the effect of the past winter, not that the bulbs are affected, but that the foliage is cramped in many parts, and the perfection of bloom put aside for a season. It will be, perhaps, difficult to find flowers without split or notched or flushed petals, nevertheless there is always enough in bloom to show the fancier what it is, and therefore these drawbacks may not affect the sales, for confidence in the grower goes a long way, and perhaps there never was in one season so many new acquaintances turned adrift upon the tulip world. A reference to the advertisements will introduce the reader to many fine novelties with which he may be far from intimate, and we can only hope that these may have sufficient bloom to enable buyers to judge of their value.

SEASONABLE ADVICE TO ALL ENGAGED IN GARDENING.

NEVER work with bad tools. The difference between the work done in a month would buy a set of new ones.

Never give up a place to better yourself, until you are sure of the new one, and certain that it *is* better.

Never trust your choice plants to the management of ordinary men. Too much or too little water will greatly damage them; and none but he who has watered them knows what they want.

Have a place for every tool, and never leave one out of its place: or, to go further, "a place for everything, and everything in its place."

Take every morsel of waste off the vegetables for the kitchen; it is so much trouble saved to the cook, and so much manure for the garden.

Never waste any animal or vegetable refuse. The soap-suds from the laundry are rich manure.

Whenever you have the opportunity, dig in the waste of the vegetable you are going to plant or sow, whether immediately or after the next crop.

Have all flower-pots washed, dried, and put away as soon as they are empty. Never put the most common plant in a dirty pot.

Never fill a pot so full of soil but that it may hold water enough to go through it: every pot should have half-an-inch of vacancy above the compost.

Never grow a bad variety of anything, if you can help it. It takes the same room, and wants the same attention as a good one.

Study economy in the means you use to grow everything. It is impossible to be too careful in this matter.

Gardeners should be well paid. It is cheaper in the end to make a man easy in his mind: he does his work better when he is not pinched in his circumstances.

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Gardeners should always recollect this with all the men under them,—Four men at fifteen shillings per week will do more and do better than five men at twelve.

Never look out for cheap seed-shops. It is only by getting good prices that a seedsman can supply articles to be depended on.

Let the draining of the ground be your first care. It is impossible to succeed to any extent with vegetables or flowers where the water is stagnant in the soil.

Cover all seeds with at least their own thickness of soil: but as some of it gets washed off, you must allow for it.

Gather fruit in dry weather and with the sun shining, and place them as carefully in the basket as if they were glass. The smallest bruise commences a decay.

Never subject a plant to a rapid change of temperature. Sudden check or sudden excitement are equally injurious.

Unless you want seed, remove the flower stems as soon as the bloom decays. The swelling of the seed-pod checks the further growth and blossom of most plants.

Never grow the same crops nor crops of the same family twice on the same spot, without an intervening crop of a different nature.

Never transplant shrubs and trees in a growing state. However carefully it may be done, the check is dangerous, if not fatal.

Keep all kinds of plants under glass, as close as possible to the light; there is no exception, unless it be some orchidaceous plants.

Never tie up lettuce or endive, or earth up celery, except when perfectly dry. They are sure to spoil if you do.

Never crowd your plants in or out of doors. Half the plants under glass are spoiled by this alone, and three parts of the nursery stock is ugly from that cause also.

Keep your plants clean. Dust and dirt on leaves make the plant unhealthy, and will in time kill it.

Plunge even hardy plants that are potted. A frost which could never reach the roots below the surface may destroy all the fibres if the pot be exposed.

Never allow the surface of the soil in a pot or in the ground to be long without stirring, unless it be naturally very open, as is the case with peat earth.

Never pot a plant without giving one-fourth in height of crocks (broken pots) or other drainage to the other three of compost.

Never grow a plant too fast: it is no credit to you, because anybody can do it, and it spoils the plant to a certainty.

Never train or support a plant unnaturally. Climbers will not do hanging about. Trailers will not do climbing. Grow it as it would grow naturally, and supply only what in such case nature does not.

Never sweep a gravel walk with an old broom. It not only tears the edging, but it also scrapes up the walk itself.

Mow lawns before the dew is off the grass, unless you have a machine, which cut it best when dry.

Never tear out the bast from any mat but a new one, devoted to tying purposes, and have that pulled to pieces at once, and kept damp

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Rapid growth makes a mild flavour, slow growth a strong one. Therefore, grow vegetables quick, and fruit moderately. The exceptions are only where size is valued higher than flavour.

Temper stable dung by repeated shakings out, waterings if too dry, and turnings over before you use for it for hot-bed or linings. If this be not done it will burn.

Carefully preserve the fallen leaves of trees, and procure as many as you can: when rotted into mould the produce is invaluable.

Keep your seeds, bulbs, tubers, &c., in a place where neither heat, nor frost, nor damp can reach them; for either of these would destroy many.

Mind your own affairs." Let all the errors you see in other management suggest corrections in your own.

Waste not a pint of rain water. Let every drop be caught somehow, for it is the best of all water for plants.

Hoe the surface of the ground all over once a fortnight, upon the same principle as servants sweep the rooms.

Let not the moisture that runs from the dung-heap be wasted; it is too good for the cultivated part of the ground to be lost to it.

Never allow weeds to bloom; it is the worst proof of thoughtlessness. One day devoted this year will save a month's application next.

Never remove a plant from one place till you are ready to put it in another, unless to get rid of it.

Whenever a plant suffers the loss of root, always prune off a corresponding portion of the head.

Never interfere with household matters. Supply what is asked for in the best way you can, without troubling your head about what it is for, or who has it afterwards.

Keep strict accounts of all you supply to the house; in case of complaint the reference may be useful.

Keep a journal of gardening, with memorandums of when everything is sown, planted, and cut or gathered for the house; with as many other particulars as you please.

Never trample on the ground in wet weather, or while the ground is swampy; rather delay the work. Even planting out things is better as the ground dries a little.

Encourage robins and toads. They are good friends to gardeners, because they destroy their enemies.

Procure, whenever you can, turves cut from a pasture, to lay in a heap and rot. "A store is no sore."

Never allow the greenhouse, hothouse, or pits, to be so hot in the night as by day.

Never light a fire in the greenhouse while you can keep out the frost by covering up.

Never leave off work or superintending until the hour at which the men leave off strikes; and always be on the ground again at the hour of their coming back.

A master gardener over many men can do more good with his eyes than with his hands. Strict superintendence is more valuable than hard work.

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Make every man before he goes to work perfectly understand how you wish it done. His way may not be yours, and yet both proper.

If a neighbouring gardener has failed in a crop, help him all you can with yours. It may be your case the next year.

Constantly examine your plants, to watch for the enemy's attack. The mealy bug, scale, green-fly, or red-spider must never get a-head of you.

The syringe is the gardener's friend; well applied over the leaves, it routs the insect tribe, and saves immense trouble of catching and killing.

Never use a clammy soil for potting plants. It is impossible they can grow well in it.

Always trench the ground before sowing carrots, parsnips, and beet-root.

Always keep frozen plants from the rays of the sun till they have completely thawed.

Cover seeds from birds with a mat until they are well up, and then devote a day or two to actually scaring the enemy, until the plants gain strength.

Prune all ornamental blooming trees and shrubs as soon as the flower has decayed: before they make their new growth you can shape them as you like.

To poor sandy soil one load of marl or loam is worth two of dung; but give both if you can, and lime into the bargain.

The instant you can see a moth, butterfly, or a wasp, catch it and kill it. You know not how many you prevent from annoying you afterwards.

Let your rule for shifting a plant be when its roots begin to cross each other at the sides, and before they become matted.

Always give plants all the air you can, without lowering the temperature too much.

Let plants stand hollow at the bottom. A flat bottom to the pot and a flat shelf will, after watering, exclude air for hours. There should be grooves along the shelves.

As regards the family matters, "hear all, see all, and say nothing." You cannot then be mixed up with any household squabbles or disagreements.

Be punctual in all things. Attend appointments to the instant: rather go unprepared, or with a thing half done, than be a moment behind time.

"Begin nothing of which thou hast not well considered the end." To find we cannot complete what we begin is very awkward.

In apportioning crops, never grow too much of anything that does not last in season, and will not keep when gathered in.

In removing trees and shrubs, never loose a fibre by violence. You can remove what you please with the knife; but if broken off or chopped, you lose the best.

In all your main operations, perform or superintend as much as possible yourself. Plants do not like changes of masters. They get fed too much, or starved.

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Send your employer to the best market for everything; or, if left to you, let no temptation remove your dealings from those who have served well, or induce you to try again if served ill.

Be careful in the matter of perquisites. Waste or excess, or good nature to others, has often deprived a man altogether of many comforts intended to be enjoyed in moderation.

Never do an act of business on a Sunday that could be done on Saturday, or be postponed to the Monday, without injury. Watering could always be avoided: giving air, perhaps, cannot be.

Have every tool and implement locked up on Saturday night, and never let them out again till Monday morning.

Works of necessity to prevent injury and waste are alone to be pardoned on a Sabbath. The rest is necessary to all men, even if we look to nothing more serious.

Be always in the garden before the men under you. Example goes further than precept or severity.

In your evenings, read well-authenticated works on science; but gardening in particular. You will constantly learn something.

If you have reason to believe you have raised something new and good, get some disinterested sound opinion as soon as you can. We are all too partial to our own works to see the bad points.

Study well the "Properties of Flowers and Plants," and act upon them in all your judgments, whether passed upon your own or other people's subjects.

Have no concerns with evenings at public-houses. A monthly meeting of gardeners to discuss modes of practice and further mutual interests may be good.

If your employer has strange whims and fancies, humour them. If he has unreasonable expectations, let them correct themselves. Mind your business and do your best: he will soon see his error.

Leave your newly-trenched or dug ground rough until you crop it. In winter time it is exceedingly beneficial.

When a crop is done with, clear it off, lay on your dressing, and at once dig or trench the ground; put all the waste vegetable to the bottom; it is so much nourishment returned, and the ground looks neat.

Never lose an hour's favourable weather for operations dependent on it: for a hard frost may close the garden against you for weeks, and throw you altogether out of your calculation.

Never water a general crop till it actually begins to suffer; for rain may render it unnecessary, and watering once begun, you must go on with it.

When you do water drench the ground all over. One soaking a-week is better than partial watering every day; and rain may serve you a turn now and then.

When you are provided with a valuable kind of seed or plant by your employers, keep it to yourself some time. It is poor encouragement for him to buy expensive things, if others are allowed to share it too soon.

Attend to no complaints of each other among your men, except so far as to watch diligently who is in fault.

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Buy nothing in "collections of named varieties." You get forty-nine useless, for one useful. Find out which are best, and purchase them only.

Propagate nothing but what is useful. You may soon get crowded with plants you do not want, and find yourself short of what is of real service.

Do nothing carelessly. Whatever is worth growing should be grown well, be it ever so common. If you do not like a thing enough to take pains with it, do not grow it at all.

Provide yourself with "Glenny's three Handbooks," "Glenny's Properties of Flowers and Plants," and "Glenny's Golden Rules for Gardeners."

Consult "Glenny's Golden Rules" for information of every kind; for they will refer you to the cheapest means of learning whatever they do not teach.

Learn from those only who have practised what they teach. Theories laid down by persons who write from what they have read are generally false.

Never be afraid of trying experiments; every time you fail you learn. We often derive instruction from the failure of our trials.

The most humble practical gardener can often teach you more than the most popular authors. Listen always with patience to any account of their doings.

Sow everything thinly and evenly. Never waste seed by stinting it of room. The plants are always the worse for it.

Begin pruning in time to get all done by the proper season. Those which are pruned too early take infinitely less harm than those left too late.

Thin all sorts of fruit; not merely those on the wall—for every body does that—but those on standards. Let there not be one above an average crop. The tree will give you this every year.

Unless your American or bog plants are in a swamp, drench them with water as soon as they flower, and never leave off till they have completed their growth. They will never fail to set their bloom.

Cover your trees on a south wall from the sun all the winter, rather than from frost. Your whole study should be to keep them back. In the spring cover lightly from both.

Loosen your trees from the wall where it is practicable, at least all the young wood. It retards the bloom, which will, by being later, get better over the spring changes.

Let no covering of trees, beds, houses, pits, or glasses exclude the daylight. Plants cannot do well in the dark.

Never roll gravel walks until rain has soaked into them and they have dried enough to prevent any sticking to the roller.

Never allow grass verges to intrude upon your roads or walks. Keep them in check by the edging iron, and your paths and roads clean with the hoe.

Never let one branch of a plant take up the growth to the disparagement of the rest. Cut it clean back to where it starts from, rather than let it conquer.

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Go round the place after a shower of rain to see where the water lies, and fail not to fill up the hollows in time.

Never see a flower or plant blown about for want of a stake. If broken off they cannot be mended, and lying on the ground long they never recover their beauty.

These are taken from eighty pages, and there is plenty left for sixpence, now we have taken all we wanted as samples.

BEST CINERARIAS FOR ALL PURPOSES, BY MR. HOLLAND.—Mrs. Livingstone, Optima, Purpurea, Wonderful, Brilliant, Perfection, Sir Charles Napier, Baroness Rothschild, Mrs. Coleman, Regalia, Mrs. Hoyle, Editor, Acme, Admiral Dundas, Duchess of Sutherland, Governor General, Imperial Prince.

GOOD CAMELLIAS.—Alba Pleno, Alexina, Albertus, Chandleri, Chandlerii Elegans, Corallina, Commenza, Countess of Orkney, Candidissima, Colletii, De la Reine, Fimbriato, Hendersonii, Imbricata, Marchioness of Exeter, Mathotiana, Ochroleuca, Picturnata, Storyii, Tentonia, Halphida, Imbilee.

SIMPLE MODE OF PURIFYING WATER.—A tablespoonful of pulverised alum, sprinkled into a hogshead of water (the water stirred at the time), will, after a lapse of a few hours, so purify it that it will be found to possess nearly all the freshness and clearness of the finest spring water. Four gallons may be purified by a single teaspoonful. —*Southern Planter.*

TO PRESERVE FRUIT IN WATER ONLY.—Fill your bottles with fruit, place them in a convenient vessel up to their necks in cold water, put them on a brisk fire and heat the water 160 degrees; keep some boiling water ready with which to fill your bottles to the neck, afterwards cork them down tight.

APPLE AND FLOUR BREAD.—A pleasant bread is made by a mixture of flour and apples, in the proportion of one of the latter or two of the former. The same quantity of yeast as in common bread, is beat up with the flour, and warm pulps of the apples. Allow it to rise for eight or twelve hours, and bake it in long loaves. Very little water is requisite; and none generally, if the apples are fresh.

TO KEEP WALNUTS.—As soon as cleaned from the husks, they must be put loosely into glazed earthenware jars to within three inches of the top; the remainder of the jar being filled up with fine dry sand, well shaken down, that it may find its way to the bottom, and fill up the vacant spaces. A cool cellar is the best place to keep them till wanted.

MIGNONETTE if kept from flowering for a year becomes a shrubby plant and perennial; it is also much more powerful as to scent.

To make Names Grow in Fruit.—When peaches and nectarines are about half ripe, write on the side exposed to the sun with melted wax, which hinders the sun from colouring the parts covered; and, when the fruit is ripe, and the wax removed, it will be found marked in the manner described.

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THE EDITOR'S INVITATIONS.

By the progress we have made, notwithstanding the vile attempt to swamp our second number, we can plainly see that the "Midland Florist" will head the papers and periodicals of the day; and we caution all those who did not get the February number to obtain it at once, so that their sets may be complete as they go on. It is also necessary to state that as we are increasing there will not be early numbers enough to complete the sets of new subscribers as well as old, it will soon be a case of "first come, first served," and the late applicants will go without; this, after the present caution will be deserved. Turning from this part of the subject to another, we receive many letters from old subscribers requesting us to send out invitations to amateurs and gentlemen's gardeners, to give us, by Post, lists of the best twelve florists' flowers of each sort they grow, and to publish the same as a guide to each other. It is said that amateurs and gentlemen's gardeners will not be swayed by their stock of these things, whereas dealers might be. This would in all probability induce a man who grows roses, dahlias, auriculas, pansies, pinks, carnations, picotees, and all the rest of the flowers or only a few of them, to give us his lists of the best twelve according to his unbiassed judgment; we confess that we are by no means interested in this recommendation further than we are desirous to meet the wishes of a large class of readers, some of whom remind us that it was done more than once, that it gratified the patrons of the work, and certainly gave useful information to those who knew how to apply it. For instance, it showed the comparative growth of particular flowers in different localities; it proved that varieties thrown away in one part of the country, were highly esteemed in another. To us this fact is not new, because, as we visit shows east, west, north, and south, we have observed this frequently: we have been told for instance, that this, that, or the other dahlia was too thin, or hard in the eye, too much quilled, and so forth, yet have seen it in the country all we could wish it; we remember seeing *Fanny Keynes* in Yorkshire fairly grown in almost all the Yorkshire stands, and perfectly honest flowers, so good, indeed, that it was first in its class, was in the winning stands, and we were obliged to award it the premier prize for the best flower in the exhibition; whereas, in other parts of the country the growers could not get rid of its hard eye without a fraudulent manipulation, that is to say, the removal of a ring or two of petals, a plan which some of the southern growers adopt, that the centre itself may on examination appear untouched. Another flower not grown well round London, but in the highest degree splendid at Sheffield was *Morgan's King*, or as it is frequently called, *Crimson King*. There it was shown a full-sized flower perfectly round in the outline, symetrical, and full up in the centre; altogether a striking variety. Not to forget a third to which we were obliged to give the premier prize for the best flower in the exhibition, *Rawling's Louise Glenny*, which with us comes too small, and does not always open kindly was in almost every stand in a

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Yorkshire show. But we could multiply these cases to almost any length, and produce other instances of flowers that grow well round the metropolis, but which they cannot grow at all in the country; we could give a list of the best twelve of anything, but they would only be one man's opinion, and although we have advantages which few if any others have, our list, however acceptable among others, would not be so satisfactory by itself, as would the unbiassed opinions of amateurs and gentlemen's gardeners from different localities. We should, however, suggest, that instead of lumping a dozen together they should give us the best scarlet, the best yellow, the best crimson, the best purple, white, rose, orange, edged, tipped, and so on; it would be more attractive and more useful. The dahlia would be a good beginning, but the same letter might contain the best twelve of all the other florists' flowers that the writer grows. Tulips, pinks, ranunculuses, picotees, geraniums, fuchsias, cinerarias, verbenas; in fact all florists' flowers may be worth the trouble and certainly the information would be very acceptable. This is not an idea of our own, because it has already been acted upon in the "Midland Florist;" and, if we are to credit a number of letters, acted upon with advantage. There is one point worth notice in this matter, it makes the readers feel as if the work was their own, and by excluding the list of dealers, there is something like a security that the writers are not biassed by the quantity in stock, or the hope of effecting sales, and therefore that their opinions will be valuable to each other. Lists therefore will not fail to be acceptable to us, and we will take care that all errors shall be corrected before they appear, that no one may be deterred from writing by want of confidence in his own ability.

A FEW WORDS TO GOOSEBERRY GROWERS.

We have seen a very excellent little volume, called, we believe, "The Gooseberry Grower's Register," in which there was all the information that could be desired, but it was an annual, and although we have noticed extracts in the "Midland Florist," it has not been purposely followed up. There appears to be a great number of persons engaged in cultivating and showing that fruit; we believe that articles from the raisers of novelties would be acceptable to a great proportion of our readers. Almost everybody with a rod or two of ground could grow the gooseberry, we have grown it ourselves with great success, but there is a vast difference between growing it for one's table, and producing it for exhibition. We should like to receive from some of the successful cultivators some friendly directions how to grow for competition. Lists of the best of favorites in each class. Lists of all the societies and places of show. Accounts of the new gooseberries, and descriptions of their qualities. Reports of meetings between the periods of show; for we believe the "Midland Florist," being published monthly instead of annually, might be of great service in promoting the more general cultivation of the show varieties, and we are aware that there are many good florists who also compete successfully at the

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gooseberry exhibitions. The public has a good deal to learn with respect to the flavor and general appearance of the fruit, although weight appears to be the great object. In short, as we are anxious to make the "Midland Forist" the means of waking up all classes, we are desirous that they should wake up one another; for, so far as we have been able to judge from the last year's numbers, the work itself has been asleep, but it must not be drowsy with us; we want, as our American friends say, to "go a-head," and it is only by a "long pull, a strong pull, and a pull altogether" that this can be accomplished; we know that many of our friends at Nottingham—the birth place of the work—had looked coolly upon the "Midland Florist" for a long time, and that no small number had deserted it; we had no reason to complain, for we had not written for it for two years. It is not for us to inquire why so many dropped it, but when we attended the chrysanthemum show in 1859 there was a strong feeling against it, which was to be regretted, for there seemed as much enthusiasm as we ever witnessed at the meetings of florists, an enthusiasm which we hope will restore the work to its early friends, or rather restore its early friends to the work. It shall not be our fault if the "Midland Florist" does not take its stand at the head of its class, and all we beg of those who read it is that they will make it known to the deserters among gooseberry growers and florists, that it will be the steady advocate of fair showing and dealing, that they will not be pestered with double numbers, and that it will be punctual in the day and hour of publication. How much it is better than it was the reader must explain. We have dropped the monthly operations, because in the "Midland Florists' Almanck" there is a perfect manual for the year.

THE OBJECT OF HORTICULTURAL EXHIBITIONS.

The objects to be promoted by horticultural exhibitions are, or should be—

1st. To encourage the skill of amateurs and practical gardeners.

2nd. To excite among these emulation to excel in their various branches of practice.

3rd. To promote and gratify the taste for horticulture, by placing before the public the most beautiful specimens of rarity and skill in fruits, flowers and plants.

Now, to encourage horticultural skill, it is necessary to adopt a series of rewards for those persons who prove themselves, by their works, to be the best; and this can only be done by imposing such restrictions upon exhibitors for prizes, as shall prevent them from being rewarded for the skill of others. To accomplish these objects, the first restriction ought to be that of having possessed a plant long enough to have made it better or worse by their own treatment this ought to be long enough also to prevent them from profiting by a fine set of bloom, or from any other circumstance known at the time of purchase or of obtaining possession; and this cannot be com-

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pleted in very many plants under one year. There ought, therefore, to be a declaration, in which the party subscribing declares, upon his word and honour, that the plants exhibited by him were *raised from seed or cuttings*, or, if not, have been *in his possession twelve months*. It would thus be impossible for him to have profited by the skill of another, even in large specimens of plants, which may have come into possession, after twenty years' growing by others—for it is certain that greater skill is required to keep large specimens after we have got them, than to keep small ones; and as he must have had to grow it after blooming, and to set it for bloom again, it is in that particular stage that the greater part of skill in the management of plants consists. By these means the gardeners, whether amateur or professional, will compete upon fair and even grounds, and the rewards ought to be sufficiently large to encourage this especial class of exhibitors to greater exertion. In the department of cut flowers, the declaration should restrict the exhibitor to having also possessed the plant from which they are cut sufficiently long to take away all chance of profiting by the skill of any other person. Thus, carnations and picotees, dahlias, roses, pinks, three months; tulips, ranunculuses, and anemones, from the time of planting out; and the committees ought to give public notice that in this particular department of exhibiting plants or flowers for skill alone, they should hold themselves empowered to call for evidence of where, how, and when any plant, root, or flower was procured, and demand of the exhibitor satisfactory proof in any case of doubt; for unless the most positive security is offered to each other, *that the exhibitors are all showing fairly*, the men of bad principle, who would evade or abuse the regulations, would be showing under the most unfair advantages over the scrupulous observer of all points, and the most honest exhibitors would rarely be rewarded. We come now to that object upon which a good deal depends—the promotion and gratification of horticultural taste.

The first point to be secured here is the exhibition of good and rare plants. It is the quality of the subjects exhibited that rivets public attention, without which exhibitors would do but little. The small societies scattered all over the kingdom for years, have done much towards increasing the taste and exciting the emulation of the members and exhibitors; but persons must already have possessed a taste of some kind for flowers, or they would not have joined such societies. But since the public has been admitted to shows, *hundreds who never had the slightest notion of floriculture and horticulture, have been imperceptibly led to delight in them.* Instead of seeing merely the same flowers that might be found at any first-rate nursery, the productions are the best specimens of the best private gardens of persons induced to exhibit: to supply this call, not a single restriction that could keep out a plant ought to be adopted. The most rare and the most beautiful are wanted—no restrictions that would keep out the one or the other should be tolerated. For the purpose of encouraging all that is good, and rare, and beautiful, a class should be invariably encouraged in which the only declaration should be, that

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the productions were *bonâ fide* the property of the exhibitor; by this the individuals who possessed fine plants would be encouraged to show them. There would be a direct inducement to excel in collecting, and also to exhibit what was possessed: nor is it any objection to this (though we have heard it made) that the most wealthy would be the winners; even if the most wealthy were so—because the man of moderate income exhibits with competitors of his class for the prizes awarded to skill—the wealthy exhibits against the wealthy for prizes awarded to the most spirited buyer. It is a mere matter of detail to consider what proportion the prizes for skill and the prizes for the best productions, without restriction, shall bear to each other; but that the principle is good we are quite sure, and that it will answer we are convinced. The plan of not requiring a declaration at shows or collections has been tried with great advantage—the object was to get plants at the shows, and it had the effect. But if skill is to be rewarded, that skill must be apparent—there may be some skill in flowering a plant well after it is set for bloom, but the real skill is in growing it after it has bloomed, to set it well for the next year, and no man ought to have a prize for a finely flowered specimen unless he had the growing of it for bloom, as well as the blooming of it for show.

By widening the distinction between the class of collectors, and the class of actual growers, there will be no temptation to declare falsely, and the practical men will be left to themselves. Various details may be entered into to suit the place where a show is held, and the time of year; for instance it may be stipulated that certain plants should only be one year old, that others shall be exhibited in the way and of the age best calculated to show the talents of the exhibitor; but, at all events we affirm: 1st, that no man shows a trial of his skill in plants which bloom once a year, until he has had it through the whole season, or raised it from seed, layers, or cuttings himself—and we trust the Horticultural Society will have an eye to this before the next circular comes out. The frivolous stuff about possessing *everything* three months is perfectly inadequate to show skill, and a mischievous banishment of many good specimens, which have been bought, imported, or even raised, within that time.

We have already given many useful hints about the management of horticultural shows, but the questions upon various points crowd in upon us so, that new points hardly contemplated are brought under our notice, and the foregoing will give more information than twenty direct answers. It is unquestionably our wish to treat all exhibitors alike, when the two classes we have pointed out are as distinct as any they can well be, and as easily provided for. It would be, indeed, a great improvement upon the present distinctions between dealers and amateurs, a distinction made that dealers might not run down their own customers; but in collectors of plants amateurs have long carried away the laurels.—*Written in* 1843.

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SCHOOL BOTANY.

"And teach the young idea how to shoot."

THERE is so much danger in some of the works on the delightful science of Botany, that nervous persons will keep books said to be written for schools, as completely out of the sight of children as possible, but it is a deplorable fact that some teachers endeavour to impress upon the minds of their readers and hearers, that vegetation is nothing but a bungle from beginning to end. They tell us, that fruits are stunted branches, that flowers are distorted leaves, that some portions of a plant are useless, and so on; showing that if they be right the Great Creator made nothing in the vegetable world perfect: that the production of flowers and fruit are the result of things going wrong, that we can have no flowers except by metamorphosed leaves, no fruit unless branches become abortions. We should like to know whether infidelity could be better inculcated, than by persuading young people that the Creator made imperfect things and useless parts, while we are endeavouring to show that God made nothing in vain, nothing imperfect. But that we may not be supposed to libel the great Botanists, let us quote one of the highest authorities in the school of botany.

BOTANICAL FALLACIES.

"Flowers consist of two principal parts—floral envelopes and sexes.

"Of these, the former constitute what is properly considered the flower; although *the latter are the only parts that are absolutely essential to it.*

"However different they (the flowers) may be in appearance *from leaves*, they are *all formed* of *those organs* in a more or less modified state, and altered in a greater or lesser degree, by mutual adhesion.

"The floral envelopes consist of *two or more whorls of transformed leaves*, of which, part is calyx, its leaves being called sepals, and part corrolla, its leaves being called petals.

"A flower being, then, an axis surrounded by leaves, it is in reality *a stunted branch*; that is, one the growth of which is checked, and its power of elongation destroyed.

"That flowers *are stunted branches* IS PROVED, firstly—by all their parts, especially the most external *occasionally reverting to the state of ordinary leaves;* secondly—by their parts being *often transformed to one another;* and thirdly—by the whorls of flower buds *being dislocated, and actually converted into branches whenever anything occurs to stimulate them excessively.*

"The fruit is the flower, or some part of it, arrived at its *most complete state of existence, and consequently is itself a portion of a stunted branch.*"—*Lindley's Outline of the first Principles of Horticulture.*

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A melon, a pine-apple, or a peach, is just as much a bunch of distorted leaves as a child is a bunch of distorted toes, or a stunted arm, and the men who would teach such absurdities deserve to be well birched by all their pupils. We have heard it observed, that of all the students in botany, the medical students are the worst, and pay least attention. No wonder neither; the medical students are generally young men of education, and it is nothing to their discredit if they laugh to scorn the people who offer such an insult to their understandings. We read in the Holy Scriptures that God created all things and saw that they were good, each bringing forth seed after its kind, &c., and are we to be told by pragmatical professors of botany, that it is all a lie? And that plants and trees never bring forth anything until their leaves are *deformed* into flowers, their branches *stunted* into fruit? Why, such brainless gabble brings the science into contempt, and ought to consign its promulgators to the same fate. We hear people talk of the spread of learning, and the advancement of science, but if science mean a blind following of teachers who outrage truth, better had we leave it alone. We are told by an authority which nothing can shake, that the lilies of the field are more beautiful than Solomon in all his glory; but some of the empty-headed gentlemen who teach botany would have us believe that lilies are mere distortions. Suppose, then, for a moment, that the people were silly enough to receive these mountebank doctrines for truth—suppose there were no writers who would venture to oppose them (and be it known, many who can do good service are too apt to leave folly of this kind to cure itself), we should have systems established in opposition to the Scriptures themselves. Science is too much in the leading strings of humbug, and more especially the science of botany; it is neither taught in intelligible language, nor founded upon intelligible principles, and we must see how far we can open the eyes of the English public to the facts upon which it is founded, and the fallacies by which it is disgraced.

Have we said too much? There is enough here to justify us in saying from the pernicious dogmas of Botanists, "Good Lord deliver us!"

THE WEAVERHAM ANNUAL FLOWER SHOW.

This show took place at Weaverham Gate. The plants which consisted of polyanthuses, auriculas, and pansies, were upwards of two hundred in number and of very superior quality. The following is a list of the prizes:—

The premier prize of 10s. for the best pan of four auriculas—Booth's Freedom, Lancashire Hero, Popplewell's Conqueror, and Meteor Flag, Mr. James Barrow.

For the best two auriculas, a kettle—Lady Ann Wilbraham, and Sykes complete, Mr. J. Dickinson.

Best two polyanthuses, a kettle—Beauty of England, and Bullock's Lancer, Mr. Peter Barrow.

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Best twelve pansies, a kettle—Mr. Jonathan Saunders.

Best green-edged auricula and dark polyanthus, by maiden showers, a kettle—Jubilee and Lincoln, Mr. Thomas Taylor.

GREEN-EDGED AURICULAS. 1st.—Freedom, J. Barrow. 2nd.—Imperator, J. Dickinson. 3rd.—Colonel, J. Barrow. 4th.—Lovely Ann, J. Dickinson. 5th.—Lord Brougham, Thomas Taylor. 6th.—Unknown, Peter Barrow. 7th.—Robin Hood, J. Dickinson. 8th.—Unknown, Peter Barrow.

GREY-EDGED. 1st.—Lancashire Hero, J. Barrow. 2nd.—Mary Ann, J. Barrow. 3rd.—Ne Plus Ultra, J. Dickinson. 4th.—Bang-up, S. Bancroft. 5th.—Privateer, J. Barrow. 6th.—Sykes complete, Thomas Taylor. 7th.—Conqueror of Europe, Peter Barrow. 8th.—Ringleader, J. Saunders.

WHITE-EDGED. 1st.—True Briton, T. Taylor. 2nd.—Smiling Beauty, J. Barrow. 3rd.—Potts Regulator, J. Dickinson. 4th.—Ashworth's Regular, J. Dickinson. 5th.—Bright Venus, T. Taylor. 6th.—Richard Headly, J. Barrow. 7th.—Unknown, Peter Barrow. 8th.—Catherina, J. Dickinson.

SELFS. 1st.—Kenyon's Freedom, J. Barrow. 2nd.—Metropolitan, J. Barrow. 3rd.—Lord Leigh, J. Barrow. 4th.—Blackbird, J. Barrow. 5th.—True Blue, J. Dickinson. 6th.—Meteor Flag, J. Barrow. 7th.—Royal Purple, J. Barrow. 8th.—Blue Rock, J. Bancroft.

ALPINES. 1st.—Goliah, T. Taylor. 2nd.—Apollo, T. Taylor. 3rd.—Duchess of Cambridge, S. Bancroft. 4th.—Conspicua, T. Taylor. 5th.—Rosamond, T. Taylor. 6th.—Unknown, Peter Barrow. 7th.—Unknown, Peter Barrow. 8th.—Duchess of Cambridge, J. Dickinson.

DARK POLYANTHUSES. 1st.—Alexander, S. Bancroft. 2nd.—Beauty of England, J. Barrow. 3rd.—Russell, J. Barrow. 4th.—Lincoln, T. Taylor. 5th.—George the Fourth, S. Bancroft. 6th.—Bang Europe, J. Barrow. 7th.—Exile, Peter Barrow. 8th.—Unknown, Peter Barrow.

RED. 1st.—Kent's Queen, J. Barrow. 2nd.—King fisher, J. Barrow. 3rd.—Lancer. J. Barrow. 4th.—Sydney Smith, T. Taylor. 5th.—Princess Royal, Peter Barrow. 6th.—Friendship, S. Bancroft. 7th.—Unknown, Peter Barrow. 8th.—Queen, Peter Barrow.

PANSIES.—1st.—Best twelve, J. Saunders. 2nd.—Best twelve, S. Bancroft. 1st.—Best six, J. Saunders. 2nd.—Best six, J. Saunders.

Northwich Guardian.

PREPARING THE VERBENA FOR EXHIBITION.

THIS popular little flower is every season approaching nearer to the standard of perfection, and is becoming a great favourite at exhibitions, both in pots and in bunches of the cut flowers. There is no plant of which the varieties differ more in habit: some tower up a considerable height, and exhibit robust growth; others creep along

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the ground, and lie as close as possible, rooting at every joint as they proceed, and covering the ground like a carpet; others, again, take the form of a pretty shrub, and, if well managed, make excellent pot plants. If you desire to exhibit in pots, select those of the most shrubby habit, and as soon as you get your plant, which we will suppose to be fairly rooted, you must take off the top, so as to leave only three or four eyes; or if it be early in the spring—say, January or February—take off the top two or three joints, and strike the cutting for your own plant. As soon as it roots, which will be pretty soon if placed in bottom heat, pinch out the centre eye. This will induce side growth, which may be regulated as you require. If any of the side shoots grow rather vigorously, and go out of bounds, they should be checked; and by continuing to check the forwardest until the plant is both the form and the size you require, you may then allow all the ends of the branches to go on to flower, and the plant will be covered; whereas if, in the early part of the growth, you allow a shoot to go to flower, it spoils the rest of the plant, and you can do nothing with it until it has been shortened, and an entirely new growth has been made. The pots have to be examined as you progress, and as they fill with roots they are to be changed to pots of larger sizes; thus the growth is excited continuously, so long as you wish to increase the size, because, by nipping off the buds as fast as they appear, the growth is promoted, and the result is, the whole of the plant blooms at once, which, if you are showing in pots, is just what is required.

If you are to show in a stand of cut flowers, by all means plant out in the open ground, and be content to select the particular trusses you are intending to show, and keep off the sun from the time the colour is beginning to show till the day you cut it. All the brilliance of a colour flies in the hot sun. A separate shade for each plant is the best. There is no comparison between a well grown truss in the open ground, in good soil, and the best that can be had from a pot, unless the single truss of blossom is encouraged, and the rest taken away before they grow too much. In fact, if we are to cut flowers, we ought to do with verbenas as we do by pansies—keep striking and putting out young plants in rich ground, that there may be a constant succession of blooms. The plan at some shows is to make large bunches. No justification can be offered for this, except the mercenary one of making a great show. A single truss is all that can show the judges the real merit of the variety or of the growth. Bunches may be patched up from various beds, and fifty pieces may go to make up the bunch; whereas the form of a natural truss is altogether kept from view, and the merit of the plant lost. A single truss deceives nobody; you have not only the shape of the individual flower, but you have also the manner in which the flower lies as it grows; for it must be obvious that the form of a truss is as important as any property of the plant, and that the best-formed individual flower in the kingdom would be useless unless it forms a respectable truss on the plant.

With regard to the arrangement of the flowers for show, take

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especial care to be uniform: place darks and lights opposite each other, but with one different between; lights at all four corners, darks between them; or darks at all four corners, and lights between them. Let not one end of the collection be light and the other dark, for it is in the worst possible taste, and leads to bad results.

HINTS TO AMATEURS.

PLANTS that are grown too fast cannot be handsome. The more rapid the growth, the further apart are the leaves, the longer the bare part of the stems. Flowering plants are better grown too slow than too fast.

Much fruit is spoiled on standard trees by growing too thick. They should be thinned like wall fruit; they will grow finer, and the crops will be more regular.

American plants, such as Rhododendrons, azaleas, and the like, that have to grow on the decline of the flowering, in the hot months of June, July, and August, should be copiously watered directly they are out of flower.

Never buy any quantity of seed without knowing the party you buy of; and before you depend on it for a crop, put a hundred grains in a hot-bed, and see what proportion is alive and what dead.

Always earth up the cabbage tribe of plants as high as the lower leaves; the stems will strike out fresh roots all the way up, and derive the greatest benefit from that new source of nourishment.

Plants that grow tall and ugly, and flower at top, should be struck when three parts grown up. The tops come into flower quite dwarfs. Crysanthemums are of this description.

The forcing of plants into flower early by heat should be managed carefully: begin cool, and gradually increase it week after week until it will bear the stove. Too sudden a change of temperature destroys the beauty and sometimes the plant.

By pruning moss roses in March, April, and May, a portion each month, you will create a long season of flowering. The growth pushes for the ends, and by cutting the branches back to eyes that have not even started, you can protract them a month.

A lilac is best as a standard, because all the heads will bloom, whereas all of a bush does not; besides, you can keep down the suckers which spoil all neglected lilac bushes.

All herbs may be dried green, rubbed into powder and bottled; but the seeds of parsley, fennel, celery, &c., will impart all the flavour to soups, stews, hashes, &c.

When you syringe trees to destroy vermin, clear the ground immediately under them, for grubs or flies washed off will not be all killed, and many would return.

Autumn sown parsnips have sometimes beaten the spring sown ones in weight and appearance; in flavour no difference; but not when the winters were severe.

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Potatoes receive the attack of disease in the haulm; if lime be sprinkled on the diseased part, it dries, and stops it. If the haulm be cut off below the parts affected, they suffer no more; but as potatoes, like all other roots, bulbs, and tubers, derive nourishment from leaves, depriving them of part before they have swelled, lessens the crop.

Few people do half enough with litter for protection. Pea-haulm half a foot thick will save almost any crop from frost, but it should never be on an hour in mild weather.

Plants in pots, standing in the open air, are much sooner effected by frost than plants in the ground, because the frost gets through the sides of a pot, and freezes the tender fibres, which are always next to it, whereas in the ground it does not reach till long afterwards, if at all.

In pruning, always cut sloping upwards, that the wet may not lie, which it will on a flat surrace; also, always have a bud opposite part of the sloping cut.

In grafting, take care that the bark of the stock meet and join on one side; if the other is an inch off, or six inches off, it will not effect the union.

Never allow the seeds of any weed to ripen on the ground; if this were always attended to, a garden or farm would soon be cleaner, and in time clean.

Never allow a hedge to get foul, or anything to grow in a ditch; it is a receptacle for weed-seeds, and if neglected would soon make the adjoining ground as foul as itself.

Always clip hedges, to keep them down, and make them grow close. If you neglect this, they grow open and naked at the bottom, and keep off the air, and sometimes the sun, by their overgrown tops.

One good watering that saturates the ground, does more good, and will last longer, than half-a-dozen daily sprinklings, or partially watering each plant.

Seeds may be covered in general about their own thickness, so that they be fairly covered, though they will grow if deeper. Beans and peas, therefore, must be deeper than cabbage or mustard-seed.

The bulbs or corms of the crocus die every year, and new ones come on the top of the old ones, at the bottom of the shoots. Therefore, every year brings them nearer the top. When they are not taken up, an inch of earth should be put on the top of the bed.

Always earth up plants of any kind in fine weather, so that the earth will work well, and bruise easily, so that the lumps may be broken small, and the soil set close in to the stem of the plant.

Plants in pots should be kept dry in winter time; they take less harm in case of frost, So that life be kept in them, they cannot be watered too little. The plants are then at rest.

Those alone can be fairly called hardy annuals that will bear sowing in the autumn, to bloom in the spring. Two-thirds of the things called hardy annuals are killed with a slight frost.

The twigs of fruit trees intended for grafting are sometimes obtained long before they can be used. Put the lower half of them into the ground, and they will keep for weeks as well as if they grew on the tree.

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Borage is said to be good for bees, and should be sown in the neighbourhood of hives. They want only thinning, if too crowded, and grow well in the common borders.

The sun should never reach the bloom of a tulip. One hour's hot mid-day sun would shorten the flowering season a week. Those tulips under shade are in flower a fortnight sooner than those exposed.

It is of no use fumigating a house to kill insects, unless the place be made air-tight, and be thoroughly filled. The house begins to fill at top, as the smoke ascends, and looks filled long before it is so at the bottom.

In all cases, the removal of flowers and the seed pods the instant they are past their prime, strengthens the plant, and prolongs the flowering. It weakens a plant more to perfect seed than it does to grow branches.

Prune standard fruit trees as regular as wall-fruit trees, though not so particularly; but the heads ought to be thinned out, to let in the sun and air, and all spindly and weakly shoots removed.

Plant always kitchen crops after wet weather. Plant shrubs and trees in dry weather, when the earth crumbles well, and runs in between the fibres and thick roots. Water well before covering quite up.

Uneven turf or grass land can never be made into good lawn, but it can be wonderfully improved by cutting the grass close, filling up all the hollows with road sand or drift, and well rolling it. If there be any of the holes deep, a few grass seed sprinkled on such places will help.

Drain all your lands, that the surface may be laid level. Never resort to open or surface drains, if you can help it. Some meadows are absolutely spoiled by surface draining.

Hot-houses, green-houses, pits, and other horticultural buildings for supplying a warmer atmosphere than the open air, should always be cooler at night than in the day time. It is too frequently managed to have the reverse; the fires are made up in the evening, and the plants are forced more in the dark than in daylight.

Never grow any thing carelessly. If it be worth growing at all, it is worth growing properly. Jerusalem artichokes and horseradish are both treated ill, but there is no comparison in their quality when treated as weeds, and when cultivated as they should be.

Turnips for families should be sown frequently, always in or just after wet weather; so that there be not too many sown at once, the advantage will be great. There is not a more useful vegetable, nor a more general favourite.

Coleworts are a coarse kind of greens sold in bunches. Of late years, market gardeners have found young plants of cabbage eat much better, and they are good at any stage of their growth. Cabbage plants may always be planted at half or third distances, so that that the intermediate ones may be pulled for coleworts from time to time, the others left to cabbage.

Broad beans should always be topped when in full bloom. While the plant is growing, it takes from the swelling pods the strength they require; take off the tops and all the strength goes to the seed.

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Directly a cauliflower shows its white heart well, break down the upper leaves upon it, so as to exclude the sun, which would turn it yellow long before it comes to its full size.

Fruit should always be gathered in dry weather, and when the sun has dried up the dew. Many sorts are gathered unripe, but there should be a rule for this. Apples and pears for keeping should be taken when the pips are just showing colour, however faintly.

The reason why straight walks and roads are not proper in landscape gardening is, that we find no such things in nature, and landscape gardening is, properly speaking, an imitation of the beauties of nature.

From the instant the leaves fall, deciduous trees may be moved; but from the time the buds begin to swell, the delay is not good, though it may not be of any serious damage if care be used, any time before they burst.

All plants remove best when they are resting, but evergreens growing in peat earth can be removed with any quantity of earth to their roots, and are often removed actually in bloom.

Never trample on dug ground in wet weather more than you can help, and especially if the soil be adhesive. It forces the air out and makes it hard and solid as it dries, and so should be avoided.

Bulbs and tubers should never be kept out of the ground a day after they indicate growth. All they shoot out of the earth weakens them and affects the bloom.

Potatoes that have begun to shoot should never be used for seed, if it can be avoided; and on no account should they be cut in that state for sets. If they must be used, plant them whole.

Leeks, though not usually grown so, are the better for earthing up a little after the fashion of celery; there is more of the plant blanched.

Mint and fennel are both in demand sooner than they come up naturally. A few roots in pots, put in a hot-bed early, yield a supply till they come in the open air.

Private people used to plant the tops of the horseradish to produce good sticks. An inch of horseradish from any part of a rough stick is quite as good as the crown.

Peas may be had from June till September, and sometimes through October, by continuing a succession of sowing of those kinds which are the shortest time growing; but in hot weather, young crops must be shaded a little and well watered.

Spinach:—Many sow the prickly or winter spinach only for winter use, but the round leaved or spring kind has been known to stand as well, and the flavour is better.

Never attempt to save seed from two sorts of the cabbage family at the same time, each is sure to spoil the other.

Ground that is to be vacant in winter time should always be left rough or in ridges. The more the frost can penetrate it, the better it is. If the whole depth of a spade could be frozen through, it would be as good as a coat of dung.

Worms can be killed with salt or strong lime water. The former, however, will kill plants also, if used so as to reach their roots in any quantity.

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The common daisy root, or carrots, are so attractive to the wire worm that they will leave anything planted near them to bury themselves in their more favourite food; pull up the daisy roots and carrots every two days and kill all that stick on them.

Flowers and shrubs near dwellings should be, for the most part, fragrant, or at least there should be enough fragrance to impart all the sweets of the garden at the opening of a door or window.

A plant which comes out at a guinea may be had in a few months at a crown, and before the year is out at half-a-crown. How well it pays one for waiting, besides enabling us to see what to buy!

We have bought seeds one season at ten shillings each, and the next might have bought them at sixpence; we might have saved a good deal of money with a little patience.

In striking cuttings, bottom heat hastens the rooting, but it is in many cases not worth the trouble to apply it, because there is no object in hastening, and in some things it requires much more care and attention.

Want of light to plants makes them pale, want of air makes them draw up long and slender; plants grown in the dark would be quite white.

The hearts of cabbages and lettuces are white, because their outer leaves keep them in the dark; celery is white as far up the stems as the light is kept away by earthing them up.

Seeds always keep better in their pods than threshed out, and for private use should always be so kept, if the nature of the pods will allow of it.

Potatoes can be grown from struck cuttings, and to rapidly propagate any particularly rare sort, it may be done; lay the tuber in a hot-bed, and as fast as the eyes send out shoots an inch long, pinch or pull them out, pot them, and place them in a hot-bed. You get many plants from one tuber; plant them in the ground in May.

The side shoots of cabbage and of lettuce may be pulled off, struck, and grown, and will often produce as good heads as the parent did.

Cabbage sprouts:—If, after cutting the cabbage, and the sprouts begin to grow, you pull off all but the best one, and fresh earth them up, the second crop of cabbages will be quite as good as the first, and nearly as large.

The lighting of fires to burn weeds on the windward side of an orchard, and making a great smoke that blows through the trees, is an excellent method of disturbing the grubs; a whole orchard might be cleared in this way in windy weather, for the instant that smoke reaches the grub it rolls up and falls.

The best way to reduce the vigour of a tree and throw it into bearing, is to prune the roots; it is far better than any other mode of hastening maturity, such as ringing the bark, or tying with ligatures, or unnatural thinning.

Beating the fruit off a walnut tree, breaks off a good deal of the wood, and is as good as pruning; it is said, the more you beat them the better they bear.

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GROWING PLANTS IN MOSS.

Various experiments in growing stove and greenhouse plants entirely without soil about their roots, have been carried on for some years in the garden of the Caledonian Horticultural Society, by Mr. J. M'Nab, the superintendent. In those experiments, the plan generally adopted has been to shake all the soil from among the roots, which are enveloped in moss, and the plants are then suspended from the roof of the house, the moss—and consequently the roots—being preserved in a moist state by means of worsted syphons connected with phials, or vessels of water suspended near the plants. Success has generally attended these experiments, the plants growing well, and also producing their blossoms. Some of these plants were produced at a meeting of the Society held in March, 1848, and among them were two plants of camellias, in bloom, which had been subjected to the above treatment since July 1847. There was also a very fine specimen of the Strelitzia Reginæ, which had been grown on this plan for the last three years, and had never failed under this mode of treatment to produce its gorgeous flowers twice in the course of each year, in spring and in autumn, during the months of February and March, and also during August and September. In the ordinary mode of culture it is not easy to induce this plant to produce its blossoms, even once in every year. It thus appears, that many plants besides those usually regarded as epiphytes, may be grown successfully on the same species.

THE MANAGEMENT OF GREENHOUSE PLANTS.

WRITTEN FOR AMATEURS.

One of the principle points to look after in the commencement of a greenhouse management, is to provide near it a room or shed in which all the littering business, such as potting, cutting down, pruning, shifting, and other dirty work may be done. In this there should be a strong table, a bin with several partitions, in which particular composts should be separately kept; these to be filled with—

1. Peat rubbed through a very coarse sieve.
2. Loam from rotted turves.
3. Potsherds, or broken flower pots of two or three sizes, kept separate.
4. Leaf-mould, being leaves that have rotted into mould.
5. Dung from a melon or cucumber-bed rotted to mould.
6. Silver sand, or very clean river sand.
7. Cow-dung rotted into mould.
8. Turfy peat, merely chopped into small pieces, of say half-an-inch to an inch square or solid.
9. Loam from the top spit of a pasture, without the turf.
10. Horse droppings rotted into mould.

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But if there be not convenience for all this, or they cannot be got at, peat (No. 1), loam (No. 2), potsherds (No. 3), and dung (No. 5), are absolutely necessary, and could be made shift with. Then there should be trowels; short blunt-ended sticks of different sizes, to poke down the soil round a plant when shifted from one sized pot to another; scoops like a scoal-scoop, to take up the different soils, and by which the pots may be measured as they are taken; sticks of all lengths for supports to plants in pots; flower pots of various sizes, from those called *sixties* to the largest, called *ones*. These sizes comprise wide-mouthed and uprights, between which there is very little difference in the quantity of mould they will contain, but one is formed with nearly straight sides, the other wide at the top and tapering at the bottom, and of course there is a difference in the diameter across the top; there is also a different form, and a slight difference in the measure between one pottery and another. However, as the most general, and therefore the guide for any who propose to follow our directions, the measure of the various sizes may be thus estimated, especially necessary perhaps, because some writers say three-inch, or six-inch pots, instead of sixties or thirty-twos. The measure runs thus:—

	Wide.	Deep.
Thumb pots, sixty to the cast, are	$2\frac{1}{2}$ in.	$2\frac{1}{2}$
Sixties, that is, sixty to the cast	3	$3\frac{1}{2}$
Forty-eights, forty-eight to the cast	4	5
Thirty-twos, thirty-two to the cast	6	6
Twenty-fours, twenty-four to the cast	8	8
Sixteens, sixteen to the cast	$9\frac{1}{2}$	9
Twelves, twelve to the cast	11	10
Eights, eight to the cast	12	11
Sixes, six to the cast	13	12
Fours, four to the cast	15	13
Twos, two to the cast	18	14

Besides these there should be a number of bell-glasses, of the sizes necessary for most of these pots, so that the edge of the glass should come half an inch with the edge; pruning and budding knives, and pruning pincers, a very handy instrument, by which a lady may, without exerting much strength, snip off a branch as thick as her little finger; bass matting in skeins or lengths should hang across nails all ready for use, for although the bass gets harsh and dry, it only requires wetting when used to make it tough. Everything should be ready for use without delay, for nothing is worse than to be obliged to leave a job to procure anything that may be wanting. Labels of wood or zinc of all proper sizes, and wooden ones, should be painted black, because when used they should be covered with white paint where the writing is to be placed, and a sharp pointed stick will make a distinct mark through the white paint, showing the black underneath it; the white paint cannot be laid on too thin at the time the writing is to be done. Wire trellises for climbing plants of such sizes and shapes as are best adapted for the several species, and boxes or pans about six inches deep for the purpose of sowing seeds in, will be found requisite.

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A small nest of drawers for the preservation of seeds, as well for the borders as the house, and shelves for placing things on out of the way; watering pots of various sizes; a portable garden engine or syringe with roses of various sized holes for the distribution of the water in different degrees of quantity and force. All these things are desirable, and anything short of this makes more work, although it is quite possible to do without any of them but the pots and the soils, and these, if the worst come to the worst, might be put in some corner out of doors. It is not our business to show how things *may be done;* we have shown how they *ought to be done*, and the nearer these conditions can be complied with, the better. We next come to the

CHOICE OF PLANTS.

As a greenhouse is, properly speaking, a house for the protection of plants from frost, and no more, and is the only description of house in hundreds of establishments, we look for a tolerably miscellaneous collection of different families, likely to make the best show and continue in the best health. A hundred families of plants would do well in a greenhouse, but nobody with any taste would try to grow a large number of families, but would more judiciously endeavour to grow a number of the best varieties in each family of more choice genera. And some few may be commenced with as the most eligible, while others may be left to be picked up as they may be met with and admired. The following are essential, because they can scarcely be beaten for effect:

Azalea indica, half-a-dozen varieties; Camellia japonica, the same number; Geraniums, the like number; Hovea *Celsii* and *illicifolia;* Chorozema *varium* and *rhombeum;* Acacia, six varieties; Ecapris *grandiflora, miniata, impressa,* and *campanulata alba;* Boronia *serrulata;* Calceolaria, six varieties; Cereus *speciosissimus;* Epiphyllum *Jenkinsonii* and *truncatum;* (the three latter known as Cactus *speciosissimus, Jenkinsonii,* and *truncatus);* Cineraria, six varieties; Orange, Lemon, and Lime; Crowea *saligna;* Cyclamen *persicum,* and *persicum roseum;* Daphne *indica odorata;* Erica, six varieties; Fuchsia, six varieties; Hydrangea; Ixia, six varieties; Tropæolum *tricolor, Lobbianum, azureum;* Crassula *coccinea* and *falcata;* Cytisus *racemosus;* Lilium *japonicum,* two varieties; Verbena, six varieties; Styphelia *tubiflora.* Although we could mention plenty more, there are already mentioned eighty-four pots, if there be only one of each variety; but these are all subjects that may rank high as rich and beautiful plants, blooming at different periods. If the greenhouse would hold more, and a lady is inclined to grow more species, instead of doubling some of these, let them be selected at nurseries according to fancy. If we had to recommend, we should say double the number of varieties of camellia, erica, cineraria, fuchsia, geranium, calceolaria, ixia, verbena, and azalea indica; or if not the latter, have duplicates of each sort of the best six. Very few plants could be added with so much advantage to the collection as increasing the varieties, or doubling those mentioned. We are to presume that these plants are purchased in nursery pots, and it mus-

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be taken as a general rule, that no plant must be kept in the nursery pot without examination. Our business, however, must be to take family by family, and so direct the fair cultivator, that no vast error can be committed.

STATE OF THE HOUSE.

The temperature of the greenhouse is important; a free ventilation is desirable, nay, absolutely necessary, but a current of air is to be avoided; it is as injurious to plants as to persons. Two doors opposite to each other should not be open, unless the weather is very still, and all the front windows are open also. In cold weather and when the wind is chilly, the door at the windy end should never be opened. It is better to open all the front windows in mild weather, unless the wind blows on them, when they are better closed, and the top lights let down a little. In very damp weather the fire should be lighted to dry the house, and the top lights be lowered to let out the steam. In frosty weather, when there is danger in leaving the house without fire, it should be lighted all day; and even in a frost the top lights may be down a little, but the glass must be watched, and at night, instead of making up extra fire and closing all the house to increase the temperature, have proper persons to attend, and to see that the house is *not* warmer, nor so warm if possible, as it was in the day. Thirty-five is high enough for the night, but few trust to it, because three degrees lower is frost; forty is, however, quite as much as it ought under any circumstances to reach at night, for there is not one greenhouse plant that does so well with fire heat as without it, if there be no frost.

There are different dispositions and habits among the families we have mentioned, but they will all do well in the same house, by giving some the coolest and others the warmest place; but care should be always taken to have the house cooler by night than by day, whenever it is practicable. Nevertheless, there will be times when the severity of the frost, with a wind to assist it, will so lower the temperature, that all the fire you can give the house may be only sufficient to keep out the cold, and prevent the temperature from going down to freezing point. As regards giving air, even in the height of summer, if there be plants in the house, there should be no thorough draught from end to end; let the top lights be down, and the front lights open, and then there is a circulation all over the tops of the plants, but no draught through them.

PLAN OF A STAGE AND SHELVES.

The front of the greenhouse is the most valuable part; a shelf along the top, just over the front windows, and under the roof, is essential, as it holds all small things that want to be near the glass. The table, or broad shelf in front, at the bottom of the front lights, should be as wide as two feet six inches, for it is of great service for many plants that require constant care and attention; they are easily got at, they are near the light, may be turned round easily every day to prevent their growing one-sided; and this front should be wood trellis-shelving instead of solid, or instead of stone or slate; nevertheless, if it be solid, strips of lath should be laid along, an inch or so part, so that the bottoms of the pots may not be on a flat place, so as

to exclude the air from the drainage-hole. There should also be a good shelf on the back wall near the top for such of the plants as want most air and least warmth, especially for things that rest all the winter, and the main stage should be as near the glass as it is possible to construct it, due regard being had to the growth of the plants. There should not be any shade; light is essential, air is essential, and, above all, room for the free play of this air is essential; though it is pretty generally the practice to put the plants in a greenhouse as close together as possible, there ought to be as much room between them as they occupy; and the nearer you can comply with this, the better they will grow. Cleanliness is also one of the great requisites for the health of plants; dead leaves, damp corners, dirty shelves, decaying flowers, and litters of any sort are injurious: whatever the damp can hang about, is likely to produce mildew; the drawing-room itself does not require cleaning more than the greenhouse, if we intend to do the best with the plants.

WATERING THE PLANTS.

The best water for plants is rain; not a quart should ever be wasted. A tub, or a tank, should be inside the house, and the entire rain from the roof should be conducted by a pipe to the inside; nothing is more simple and attainable, nothing more valuable than a contrivance for a supply of rain-water. Next to this it is desirable to have it the same temperature as the atmosphere of the house. One-half the plants that are unhealthy have been chilled by the watering, and, in many places, where they can only get spring water, they are very unsuccessful: some do not know why, but there is no difficulty about establishing the fact. Hard water is injurious, mineral waters are often so; river water is next to rain in value, if it be soft; but even that ought never to be used cooler than the air of the house. Pond water is next to river, if there be nothing noxious flowing into it, but all of these are poor apologies for the rain-water, conducted into the house. Some caution is required in one respect; when the wood-work has been fresh painted, the water will poison anything, so that it must be turned away until it neither tastes nor smells of the paint. In the mean time, some pains must be taken to get good water. With regard to the mode of administering water, only those within reach may be said to belong to ladies' work; but it is quite necessary they should set one who understands it to do the rest, for too much or too little water is fatal. No plant should be watered while the soil is moist; but it is as essential, that when it is watered, all the soil in the pot should be moistened. There is another point that requires attention. If, while other plants are apparently dry, any one seems wet, it should be examined, to see if the drainage be free; because it will be obvious either that the plant cannot absorb so fast as the rest, or that the water has not the means of draining away; if it appear that the drainage is clogged, the ball must be relieved of the crocks or other matter put in at the bottom, and which will appear to have got the soil run among it, and fresh crocks must be put in. A plant suffers as soon from want of the supply of air, and a

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too great supply of water, as it does from a deficiency. The cistern, tub, or tank, being handy to draw or dip water from, a lady can use just such sized watering pot as is most convenient to handle, and go round the plants to give only such as are dry the requisite moisture, not just a sprinkle at top, but as much as will cause a surplus to run out at bottom. The earth should be examined to see if it be close to the side, if not, the watering has been too long neglected: for the first symptom of suffering, or danger of suffering, is the shrinking of the ball of earth, and if this be not noticed, the water then given proves useless because it runs down the vacancy between the ball and the pot, and does not soak in at all.

MANAGEMENT OF AZALEAS AND CAMELLIAS.

The azalea indica, and camellia japonica, are as hardy as any of the greenhouse plants, and want as little labour as any, although they must have attention. When these plants are advancing their buds towards blooming, they want abundance of water, and to be placed in the part of the greenhouse least subject to draught or wind. They will do on the general stage, and may be, for the sake of appearance, set about in different parts, but not too near the door. They should be turned frequently, so that one front should not be better than another, and they will keep in flower a long time in perfection. As the flower goes off, they begin to make their new growth, rub off those which are coming where they are not wanted, and prune the plant into a good shape; they want turning daily just as much at this period as any, for they are shaping themselves, and if left to themselves without being moved, they would assuredly grow one-sided. In the middle of June they may be taken out and placed in a sheltered spot, with plenty of room, distantly shaded from the extreme heat of the sun. The ground should be such as the roots cannot penetrate, and the watering must be attended to diligently; nor ought a rainy period to prevent the same attention, for it will often be found that a bushy plant throws the rain entirely outside the pot, they therefore require examining in rainy weather as well as in fine. When they have made their growth complete, they ought to be placed in the coolest and driest part of the garden, and the quantity of water lessened considerably; they will want only such moisture as will keep them alive, and as they do not absorb much while at rest, this will be very little. In September you may restore them to their places in the house, first examining the balls of earth to see if their roots are matted round the sides of the pot; if so, change these pots for those of a size larger. The azalea and the camellia grow best in loam (No. 2) two-thirds, peat (No. 1) one-third, and the pot should be one-fourth filled with crocks.

THE CINERARIA, VERBENA, AND CALCEOLARIA.

These plants require a good supply of water when they begin to grow, and should be placed near the light when their flower-stems rise; when they decline their bloom, they may be parted at their roots, or their side shoots taken off with or without roots; if without,

they should be potted and covered with bell-glasses, but if with roots, they may be placed in a shady spot in the garden, on a hard bottom. Strictly speaking, all three of them may be called frame plants, but the distinction is not easily defined, and they do well in a greenhouse; they may be placed on the highest back shelf in September, and will seldom require watering; but in a good stock of verbenas and cinerarias, the plants need not be parted nor propagated, and the pots may be enlarged by change. Many of the plants will flower in winter and early spring. It is only the small newly made plants that need be put up out of sight, for anything that gives a flower in the winter is acceptable. Some of the verbenas will be dwarf, others require to be supported on a trellis, but the young ones may be turned out into the borders and beds in the spring, to flower the whole summer. The calceolarias will also require supports for their main flower-stems sometimes, though those are the best that support themselves. The soil in which these plants thrive is, half loam (No. 2), a quarter cow-dung (No. 7). and the other quarter peat (No. 1), well mixed. The cuttings strike easily in pots filled all but an inch with the soil, and one inch of sand; the bottom of the cuttings should touch the soil and go through the sand, but not enter the compost, though they will send their roots into it when they strike. To grow any of these large, they must have constant shifts from small to larger pots. All dead leaves must be removed.

ERICA, EPACRIS, CHOROZEMA.

This family is perhaps the most difficult to manage, because so small a neglect is fatal. The soil in which it succeeds best is poor, at least, comparatively so, for it is easily destroyed if much excited; the compost that answers best is three-fifths or parts of (No. 1) peat, and one-fifth or part of loam (No. 2), and one of cow-dung (No. 7), or less mould (No. 4), If it happens that the peat is not sandy, it may be necessary to put sand to it, not exceeding one part. Good turfy peat is, however, generally sandy enough. This should be well mixed together, so that the roots shall find all the soil alike, and not more loamy in one part than another. This compost being comparatively poor, and very pervious to water, the greatest possible attention is required as to the watering; and this may be generally applied to soils of which the greater part or any considerable part is peat, for the water runs through it quickly, and when it is once neglected till dry, the plant suffers, if it does not die. Every time a heath wants water too long together, some of the lower leaves turn yellow and fall. This makes so many naked stems to heaths of any size, but a worse effect is caused by giving too much, or by the stoppage of the proper drainage of the pots. The more full a pot is of roots, the more constant must be the watching and necessary watering, because the water cannot be held so long by the small quantity of matted soil as if there were but few roots. In some cases a heath may be wanting water twice-a-day. The cuttings of heaths should be taken from the last produced shoots, two inches, or one inch, in some cases, long; the ower half should be stripped of the leaves, and the upper half hav

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all left on. Get a pot of heath soil filled, all but half an inch or an inch of sand, according to the cutting; water the sand so that it may be saturated with wet, and stick in these cuttings so that they just touch the soil, but not go into it; cover with a bell-glass water with a very fine rosed water-pot, so that the sand shall never be thoroughly dry; wipe the glass dry inside every morning; let them be in a cool part of the greenhouse, and be shaded from the sun; when they set off growing well, you may conclude they have struck root, and pot them in sixty-sized pots. They may be kept in a common garden frame all the summer, if you please, or in the most airy part of the greenhouse. Here they may be shifted as they fill the pots with roots, and require but the ordinary attention.

GERANIUMS.

The soil, for the healthy growth of this family, may be of loam (No. 2) three parts, dung (No. 7), or for want of it droppings (No. 10), or if neither can be had, dung (No. 5) one part; peat one part, well incorporated. Cuttings may be struck whenever they can be got, but the usual time for any quantity is July, when everybody cuts down the old plants. These require no care whatever. If they are put in the open border, they will strike; but those who have choice kinds will cover with a hand-glass, and place them all in the shade: when struck, put them in sixty-sized pots, pinch out the top to induce side shoots, and leave them out of doors until September, simply changing their pots if they get too full of roots; when removed to the greenhouse, examine the roots, and, if necessary, remove them into larger pots, and place them among the other plants to take their chance. The large plants, when they have done flowering, may be cut down to such skeleton shape as shall give a chance of growing handsome; and let them remain out of doors, shifted into a size larger pot, or trimmed up about the roots to go into the same with fresh loam. In September remove them also to the house. If any of the shoots come so as to cross others, rub off those which are least wanted, to give strength to the others, and keep the plant in form. If any shoots grow too vigorously for the rest of the plant, pinch off the end, and so regulate the growth in this particular, that it may be handsome. As the blooms come out they will require shading, or they will not remain long in bloom. When in flower, you do as you please with them until the flower declines, and then turn them out of doors, cutting them down again in July, putting them back into the house in September.

CEREUS, EPIPHYLLUM, CRASSULA.

These subjects like any soil better than that which has been popularly recommended. They do not require to be starved. A compost made of loam (No. 2) one half, peat (No. 1) one quarter, and dung (No. 7 or 10) one quarter will grow them well. They want but little water all the winter, and as their buds begin to swell they may have supply. After they have done flowering, turn them out of doors,

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place the pots under a south wall, or in the hottest part of the garden. In September remove them to the house again. The crassula may be struck from cuttings as easily as the others, and if left on the ground without inserting at all will throw down its roots sideways into the earth of itself. Small pieces, however, are generally selected, and after drying the juice, inserted in small pots, where they are treated from the first like plants, and shifted from time to time as they fill their pots. The crassula carries its blooms in bunches or trusses at the ends of the shoots; consequently as soon as it begins to grow from a cutting, the ends are taken off to induce side shoots, and thus form a handsome bushy plant with many heads of flowers, in the one case (coccinea) scarlet, in the other (falcata) orange. The shifting is always best after the flowering is done. The cereus and epiphyllum require much such treatment at first. E. truncatum should be stopped until there are branches enough to hang down all round the pot, for the habit is weeping, and the flowers come on the ends of all the branches.

GENERAL RULES FOR THE MANAGEMENT OF GREENHOUSE PLANTS.

In mild weather, and during winter in particular, if there is warm gentle rain, a greenhouse plant of any kind is greatly benefited by exposure to the air; not that it is possible to remove all the plants in a greenhouse out of doors whenever the sun shines in winter, or a warm shower comes, but it is as well to know this, because we all have our favourite plants, and we can always put out a few of these when the weather is favourable.

Never indiscriminately water the plants in a greenhouse, because where there is a mixed collection of various families, some will be found to absorb much more water than others, and it is quite as bad to give too much as too little water. Half the plants in dwelling houses are spoiled by excessive wet, and especially where the pots stand in saucers to prevent the wet from running over the place when they are watered. In greenhouses we have seen this where ladies are very fastidious about the cleanliness of the shelves; but laudable as cleanliness may be, it is running the greatest possible risk to let plants stand in water. Occasionally examine the pots, and turn out the balls of earth to see if the roots are matting round the side, for it is the best rule for removing a plant to a pot of a larger size. If the plant is growing, it requires it more than a plant at rest; for a plant at rest should never be excited until it begins to advance of itself; besides, when a plant is set for bloom, and about to take its rest, until the buds swell, by a sudden excitement, such as being placed in fresh earth, or having too much heat or water, the bloom-buds get blighted, and the germs of the leaves and branches take up the growth, the former being unable to take the fresh supply, because flowers can only take a certain quantity, and the others being unlimited in their means by naturally extending themselves so long as there is a competent supply. The time, therefore, to examine the roots, is when a plant begins to make its growth, or at the decline of the flowers. There need be no other rule for changing pots, but the

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filling of the one with roots; generally, however, once in a season is enough for established plants, and that is after they have flowered, and before they make the next season's growth.

If you want plants bushy and short, you must keep pinching off the ends of branches that grow upwards; but, as the perfection of a plant is to be full of branches and leaves to the very edge of the pot, this operation of pinching must begin early, even when the cutting has just struck, or the seedling, if the plant be from seed, be only three or four joints high; but those plants which grow pyramidal in form must have the leaders preserved, and should only have such branches stopped as are inclined to come too long,—such as shoot out faster than the rest.

Deciduous plants should not be watered after they drop their leaves; but when they begin to swell their buds, they may be supplied with a little moisture, to be increased in quantity as soon as they shoot out their branches.

Seeds of greenhouse-plants are best sown as soon as they are ripe. Nature points out this for all seeds; but artificial culture, or a change of climate, suggests various changes in the plan of doing many things; for instance, a tender plant may be sown in the open borders, in the spring; and as it will meet with no frost until the autumn, it is quite proper to do so; but if the seeds were sown directly they were ripe, they would come up only to be killed by the frost. Not so with greenhouse plants: they are in a proper climate. If they come up, they will grow without interruption; and if they are in the habit of lying in the ground till genial, or we ought to say, till warm weather, where they grow naturally, they will do the same in the greenhouse, unless the temperature be prematurely raised. In all matters of doubt, we ought to make sure on the safe side. Foreign seeds, therefore, ought to be sown the instant we get them; because, next to sowing them at the time nature herself sows them, it is well to do so as soon after as possible.

All seedling plants are the better for pricking out, or transplanting, as soon as they have three or four leaves; and the most effective methods is to get small-sized pots—say *sixties*—and plant the seedlings round the edge, close to the side of the pot, about three in a pot, or four, or even five, if they are small slow-growing things. They derive the greatest benefit from their roots reaching the sides of the pot.

As you may be at a loss for the soil in which a new plant grows, use a compost that everything will live and grow in, and leave to time and experience any improvement you may make. Take loam (No. 9) which is presumed to have no dung or other exciting matter in it, droppings (No. 10), or, for want of it, dung (No. 5), peat (No. 1), and leaf-mould (No. 4), in equal quantities; and if it be too adhesive, take half a part of sand to make it more pervious to water, or at the most a whole part. Mix these well together. It will suit everything a little; and if the plant does not do all you wish, you can at least grow it well enough to get cuttings from, nd try them in lighter, poorer, or richer composts; but as we now camellias, geraniums, heaths, and succulents, will grow in it,—

and these are very much opposed in their natures.—it is fair to presume that any plant will grow in it enough to answer the temporary purpose of saving it to grow others from.

Provide, if possible, the means of shading the greenhouse in any hot or bright weather, as in the spring, when the azaleas, hoveas, and many other fine plants are in bloom, a few hours' sunshine would shorten their duration some days. A canvas roller-blind outside is very easily contrived; or a thinner blind of calico, or some such material, inside, would have as good an effect, and be somewhat lighter. But shade from the excessive heat of the sun will make several weeks' difference in the lasting of the blooms. It must, however, be recollected, that as whatever excludes the light in any part of it is an evil—and, therefore, shading a choice of evils—the blinds must not be down an hour more than necessary.

As camellias and azaleas, cactuses, epiphyllums, and many other subjects, are turned out to harden their growth and get the benefit of air in summer, the greenhouse may be supplied with annuals. Balsams, cockscombs, clintonia, salpiglossis, rodanthe, and other tender annuals, may be sown in a hot-bed in March or April; and, although they require particular treatment for large specimens, may be planted out in pots, and grown still in the hot-bed, until the time they are wanted to supply the shelves of the greenhouse.

In August, everything ought to be cleared out, and the roof of the greenhouse should be well syringed; all the dirt washed from the glass, the walls, posts, shelves, and every part. Cleanliness is everything with plants; and the house should be thoroughly clean before the plants are put in it for the winter. Nor is it at all a bad precaution during the period that it is empty, and before the syringing, to fumigate it well with tobacco, and afterwards with sulphur. The one will kill everything upwards, the other downwards. The syringing should be done with such force as to drive everything out of the corners.

When the plants are taken into the greenhouse, let the surface of the earth be stirred, the pots cleared from anything that they may have attained in the way of dirt, snails, or vermin, or anything that will cling to the outside or in the holes at the bottom.

Let the paths and floor of a greenhouse be kept dry and clean: it ought to be a paved floor, or a concrete, or some other impervious to wet; and provisions should be made for the running off of all the water that may fall to the ground; for if the ground absorbs wet it too often engenders mildew.

Plants should never be trusted to the open air before the middle of May, nor remain out after the middle of September. All before or after this is running a considerable risk.

Grapes may be grown in a greenhouse, if the growth be confined to a branch for each rafter to fruit, and the shoot which is trained alongside of it for the next year's bearing. This does not materially exclude light, but any more would be injurious: and even this must not be attempted if the shelves are to be filled after the present crowded fashion, in which the plants touch each other, and form a complete shade for the backs of the whole.

Hot-water pipes are the best means of warming a greenhouse in

winter-time, but better avoid lighting a fire as long as possible. Mats hung up in front are a great protection to the plants, and that is always the coolest part of the house; but when the glass is down to thirty-five, there may always be expected a frost in the night, or at least it should be provided against. The man who looks after the fires should be on the alert, and the mats in front should be always hung up in doubtful weather, because it is little trouble, and does no harm to the plants.

THE ACACIA, AND ITS CULTURE.

THERE is scarcely a genus in which there are so many species, presenting so many different and beautiful forms and habits, but so little variation in colour. Of the hundreds of species known, scarcely one-sixth are anything but yellow; and although several are named as white, or pink, or purple, they are mere apologies for the colours mentioned. The great charm of this genus is the extraordinary variation in the habit and form of the plant, the shape of the foliage and flowers, and the general appearance. They comprise stove and greenhouse plants of exceeding grace and elegance, and are justly great favourites in all collections. The culture of all is alike, except the difference in temperature between the stove and greenhouse kinds; but we only value the greenhouse varieties, and shall confine ourselves chiefly to them. They are nearly all evergreens; many form noble trees, very splendid objects for conservatories, and deserving a place wherever room can be made for them.

Propagation from Cuttings.—All the sorts strike freely, and should be cut when the plant is at rest, before it commences growing; strip the leaves off about an inch of the lower end of the cuttings, which should be cut up to a joint. Fill a wide-mouthed pot with loam, peat, dung and sand in equal quantities, and insert the cuttings an inch deep and half an inch apart, over so much of the pot as will just allow the edge of a bell glass to cover them, and the edge of it to penetrate the soil to exclude the air. Water them in and cover them up, place them on a slight hot-bed or on the tan of the stove, and keep the glass close down; when the sun comes out, cover the glass with a piece of thin canvass or cloth, or a sheet of white paper. Every morning, take off the glass and wipe it dry; if the soil is moist, leave it so, but if at all dry, let there be a little water given, for the cuttings must on no account be dry, as they would perish in a few hours. Continue this attendance day after day until the cuttings have struck root, which will be seen pretty well by their starting into growth.

Potting.—When the cuttings have struck root, get some three-inch pots; fill them with a compost formed of turfy peat broken into small pieces and rubbed through a sieve that would pass a hazel nut through, one-third, loam from rotted turves off a pasture, one-third, sand, one-sixth, with decomposed dung, one-sixth. The compost must be well mixed. The pots may be drained by a bit of moss, than which there is nothing better for the first potting of cuttings, because it forms the best drainage and does not rot before the time arrives for a change of pot. Place the cuttings, one in the centre of each pot,

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water them, to settle the earth about the roots, and place them in the greenhouse, properly shaded from the heat of the sun, until they have fully established themselves and begun to grow. The growth of the cuttings must depend on what you require. Let them grow naturally, according to their habit, or if you want to dwarf them, pinch out the growing point to force out lateral shoots. However, among plants with scarcely two of one habit, it is impossible to dictate. In a general way they are best, and show themselves to the greatest advantage, when allowed to grow their own way, because it is in the variety of habit that the great charm of the collection consists, and if dwarfed by stopping, this is in some manner changed. Allowing them, however, to grow their own way, there is one rule which may be adopted with all plants in-doors and out; that is, if there be any particular branch taking the lead to the amount of checking the general growth of the plant, the branch should either be materially shortened or cut close off altogether; because the branch that so takes the lead has more than its share of the nourishment, and renders the plant misshapen and unnatural. We do not mean that if the leading shoot grows rapidly upwards, it is to be checked, but any side shoot that makes the plant one sided.

Shifting into Larger Pots.—The rule for shifting these plants into larger pots is to perform that operation as soon as the roots reach the side, and begin to run round the ball of earth, and this can only be known by turning out one or two and examining them. The next sized pot to use is the four-inch. Let them be one-third filled with crocks, (which are broken pots,) upon these put the soil high enough to allow the ball of earth in which the plant is growing to stand upon it, so that the collar of the plant is even with the top edge of the pot; fill up the soil round it, pressing the earth down without damaging the fine fibres, and gently pressing down the ball so that its surface is even with the surface of the new soil, and just below the edge of the pot, so that it may hold a little water on the surface of the soil. In a day or two after this shift, during which it must be shaded from the sun, the plant may be placed in a cold frame, shaded from the burning heat, but uncovered to the morning and evening sun, and occasionally watered. Here they may grow till it is time to put them into their winter quarters, before which removal, the balls must be examined, to see if the roots are too much matted to grow through the winter; if they are, they had better be shifted before they are housed than after, as the room would not be calculated upon so well, or the potting would have to go over the winter altogether, perhaps to the detriment of the plants. If, however, this has to be done, take five or six-inch pots, and go through the operation exactly as you do with the first shifted plants. If the crocks that were put in the last pots fall away from the ball when it is turned out, well and good; but if the crocks are held to the ball by the fibres of the roots, let them go into the next pot, the same as if they were all earth, without interfering with the new drainage of crocks: observe the same rules all through, only instead of confining the plants after potting, place them in the greenhouse at once where they are to remain. They will progress rapidly,

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for the acacias are all rapid growers, and need no other stimulant than watering at proper times.

After Culture.—The third year, the plants from cuttings assume a finished appearance; they are in good form and condition and good health. They want nothing but proper attention to watering and shifting, and the shifting should, after this, be given when the plants are at rest. The soil too may be varied: leave out the dung; you do not want the plants to grow so rapidly. They flower early in the spring for the most part, and as soon as they have done flowering, they ought to be placed in the air and shade, and not be subject to heavy falls of wet, nor to be striking of their roots into the ground through the holes in the pots, nor to the high or cold winds. Where these plants, and indeed all hard-wooded plants, can grow in the cool shade, and well sheltered from drying and scorching winds, they cannot well fail to set well for bloom; and here they may remain until the autumn, when they have to be removed to the greenhouse.

Treatment of Large Plants.—As these plants advance in size, they must be the more carefully attended to, because the treatment must be upon the checking system, and that does not admit of the slightest neglect. For instance, the pots are full of roots, and there must not be the shifting that younger plants have. They must go two seasons instead of one, and this requires the most careful watering, for when pots are full of roots, twenty-four hours' neglect of watering, when the plant wants it, will sometimes be fatal.

GRAFTING OR BUDDING MANY SORTS ON ONE STOCK.

The greatest mistake that can be made in performing this operation is in using grafts of different habits; some growing vigorously, others slowly; some weak and pendulous, others stiff and short-jointed. It is a favourite subject with many amateurs, and the rose is one of the most attractive of all flowers for the operation. The China rose that has been for years inhabiting the front of a house, is one of the most inviting stocks that can be selected for the chances of success. The sorts intended for insertion should be all of the smooth-wooded kinds. The China rose must be cut in very much, and care must be taken that the most vigorous shoots of the present season's wood be left to bud on. It is best to destroy the China rose growth, and confine it to the buds inserted. One of the most favorite of them is the yellow noisette; for however reluctant this seems to open when grown on its own bottom, it flourishes well on a vigorous branch of the common China. Let the choice of sorts be according to the colour and habit. The whole of the smooth-wooded kinds, and most of the noisettes, do well. Let the buds be put in on the strong new wood, but as close down to the old wood as possible, and as the buds grow, secure them to the wall or trellis. Some roses are so rampant in their growth that they will hardly grow where there is a second; like, for example, Noisette Lamarque, which will actually grow ten feet, or more, in a

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single season. It would be folly to put a bud of this on anything intended for a variety, for it would rob the stock of all the nourishment, and others would not succeed. Whenever you intend to do anything of this kind, look well to the habit and colour of those about the garden; select different colours, but growths as similar as possible, and when you have marked a sufficient number, prepare your stock by cutting away a great part of the side or secondary branches of old wood, confining what is left to the main trunk and sufficient of the main branches for your purpose. Begin from the bottom to cut away useless old wood, but preserve every very strong shoot of young wood. Shorten even these to two or three joints, and work the buds as close down to the old wood as possible, leaving two joints only beyond it; this is in case the first bud fails, for you have then a place between the first and second joints to insert another. You will soon be gratified with the growth of the buds. The grafting of the rose is not so desirable as budding; but the plant that most invites grafting of different kinds is the camellia japonica; not that there are so many varieties of colour as there are in the rose, but it is a handsome plant, and capable of being grown into a beautiful object. There is nothing more important than the selection of sorts, and by judicious pruning just before the plant makes its growth, they can be kept in excellent order. The stock, in this case, should be cut back to a skeleton, with only just sufficient branches to take the grafts. The period chosen for the grafting should be just before the plants start for their growth; and the simplest way of grafting is the back.

THE CULTURE OF THE CYCLAMEN.

This is a very beautiful tribe of plants, of a neat and compact appearance, flowering abundantly above the foliage, which is for the most part bright and pretty, and close down upon the root. The flowers of all rising direct from the top of the bulb in single stalks, without foliage. The varieties in the present day are numerous, and increasing every season, some being produced, others introduced. The culture is very simple; that recommended by Miller has been successful with us, excepting that, instead of keeping seedlings in their beds or boxes till they bloom, we have found their blooms greatly hastened by shifting them as soon as they are two years old into pots of a small size, giving each its own pot. Linnæus decided that all Cyclamens were varieties of one species, and there is but one fact which tells against its being so, that is, some are hardy and some not so. Miller gives an account of the following six:—

1. *C. Europæum;* Sowbread, with an ivy-leaf.
2. *C. Purpurascens;* round-leaved Sowbread, with a purple under side.
3. *C. Persicum;* Cyclamen, with sawed, heart-shaped leaves, or Persian Cyclamen.
4. *C. Vernale;* Cyclamen, with heart-shaped angular leaves, which are entire.
5. *C. Orbiculatum;* Cyclamen, with an unequal root and round leaves.

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6. *C. Coum;* Sowbread, with orbicular plain leaves, shorter foot-stalks, and smaller flowers.

The first sort, *C. Europæum*, is the most common in the English gardens. This grows naturally in Austria, Italy, and other parts of Europe, so will thrive in the open air in England, and is never killed by the frost.

The second sort, *C. Purpurascens*, flowers in autumn; this is at present not very common in England.

The third sort, *C. Persicum*, has stiff heart-shaped leaves, which are sawed on their edges; these have strong fleshy foot-stalks near six inches long, of a purple colour, as are also the veins of the leaves on their other side, but the upper side is veined and marbled with white. This flowers in March and April, and the seeds ripen in August.

The fourth sort, *C. Vernale*, is commonly called the Persian Cyclamen. These appear in March and April, and the seeds ripen in August.

The fifth sort, *C. Orbiculatum*, has a small irregular root, not larger than a nutmeg; the leaves are orbicular and small; the flowers are of a flesh colour, small, and have purple bottoms. They appear in the autumn, but rarely produce seeds in England.

The sixth sort, *C. Coum*, is not so tender as the four last-mentioned, so may be planted in warm borders, where, if they are covered in hard frost, they will thrive and flower very well.

These are the species mentioned by Miller, but there are now many seedling varieties.

There are several other varieties of this plant, which chiefly differ in the colour of their flowers, particularly among the Persian kind, of which there is one with an entire white flower, which smells very sweet; another, of a rosy colour, and extremely fragrant, in all other respects like the Persicum, and very showy.

All the sorts are propagated by seeds, which should be sown soon after they are ripe in boxes or pots, filled with light kitchen garden earth, mixed with a little sand, and covered about half an inch deep, placing them where they have only the morning sun till the beginning of September, when they may be removed to a warmer exposure. Those of the first sort may be plunged into the ground close to a south wall, a pale, or reed hedge, in October, where, if it should be very severe frost, it will be proper to cover them either with peas haulm or mats, but in common winters they will not require any covering. The pots or tubs in which the Persian kinds are sown, should be placed under a common hot-bed frame, where they may be protected from frost and hard rains; but in mild weather, the glasses may be taken off every day to admit fresh air to them. The first sort will come up about Christmas, if the seeds were sown in August, and their leaves will continue green till May; and those of the Persian kinds will come up early in the spring, and continue green till June, when they will begin to decay; then they should be removed to an eastern aspect, where they will have only the morning sun, in which situation they may remain till the middle of August; during which time they should have very little water, for then the roots are in an inactive state, when much wet will rot them. The pots and tubs in which they are sown, must be kept clean from weeds; for if the weeds are permitted to

grow, their roots will closely entangle with those of the cyclamen; so that in pulling out the weeds, the other roots will be drawn out with them. In the beginning of October, there should be some fresh earth spread over the tubs or pots, which should be removed again into shelter, in the same manner as before; and the following summer they must be managed also in the same way, till their leaves decay, when they should be carefully taken up, and those of the first sort placed in a warm border, at three or four inches distance, but the other sorts must be planted in pots to be sheltered in winter.

The third, fourth, and fifth sorts, are more impatient of cold and wet than the other three; these must constantly be preserved in pots, filled with sandy light earth, and housed in winter, but should be placed near the glasses, where they may enjoy as much free open air as possible when the weather will permit; for if they are crowded under other plants, and are kept too close, they are very subject to mould and rot; nor should they have much water in winter, which is also very injurious to them, but whenever they want water, it should be given them sparingly. In summer, these plants may be exposed to the open air, when their green leaves will decay; at which time you should remove them to a place, where they have the morning sun until eleven o'clock; but during the time that the roots are destitute of leaves, they should have very little water given them, because at that season they are not capable of discharging the moisture. This is also the proper season to transplant the roots, or to fresh earth them; and as the autumn comes on, that the heat decreases, they may be removed to places more exposed to the sun, where they may remain until October before they need be housed.

Towards Christmas, if the roots are in good health, the sixth sort will begin to flower, and continue producing fresh flowers till the middle of February, and will be succeeded by the Persian sorts, which continue till May; but if you intend to have any seeds, you must let the pots be placed so as to receive a great share of fresh air, for if their flowers are drawn up in the house, they seldom produce any seeds. These seeds are ripe about July, when they should be immediately sown in pots or cases of good light undunged earth, which should be sheltered in winter under a frame, and exposed in summer in the same manner as is directed for the older roots, observing to remove them into pots at a wider distance when they are two years old; and so from time to time, as their roots increase in bulk, you must give them more room; and in about four years' time they will begin to flower; but this may be hastened by giving each bulb a pot to itself at the end of the second year, and shifting them as they fill the pots with fibres.

A successful cultivator, who gave an account of his practice, gives a further account of some varieties not mentioned by Miller, but well known now. He tells us that the Cyclamen Hederifolium is indigenous. The Europæum is from Austria, and was in cultivation in this country in 1596; the Coum or Vernum are from the south of Europe, and were introduced in 1731, in the southern counties; these species are hardy, and flower in the open air freely.

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The C. Persicum is from the island of Cyprus, requiring a warm greenhouse temperature to be grown to perfection; of this species there are two varieties, the one scentless, the other highly odoriferous.

The Repandum deserves a special notice, both from its variety and comparatively recent introduction, and great beauty; its flowers are of a rosy red colour, produced plentifully, and continues in bloom a long time; it usually flowers in May.

The C. Europæum and other hardy sorts seed freely, and if kept in pots undisturbed every year, will produce young plants in abundance without trouble. The tubers will be the size of marbles in three years, from seed; and may be expected to flower in the fourth or fifth season.

The C. Persicum and repandum are the seeders in general; the former takes twelve months to ripen it. On its becoming black it should be sown, say six or eight in a five-inch pan, in light and pretty good soil; and, if a little bottom heat is given, will quickly vegetate.

The whole of the species and varieties require one general treatment as to soil and water. After the flowering season of the spring flowering sorts, and the decay of the leaves of the autumnal ones, the water should be discontinued gradually; and on the decay of the leaves, the pots had better be placed in a shady place, on their sides, to prevent any water falling on them, as, like bulbous plants, they require a season of rest. The whole of the soil may be shaken from their roots early in August, and planted in a rich loam soil, in which is a good portion of well decomposed dung, and a little fine sand. They should be then put into the garden, and plunged until September, putting a little soot in the bottom and about the holes they are put in to keep out intruders; they will require plenty of air and little water in November and December. In January, they should be watered freely, be top-dressed with rich soil, freely supplied with water, and kept close to the glass in a warm situation, airy rather than otherwise; they will be in flower in February and March generally. The pot should be twice the size of the tubers.

The varieties mentioned by Paxton are Coum, Europæum, Hederifolum, Albidum, Purpurescens, Ibericum, Latifoleum, Linearifolum, Neapolitinum, Persicum, Albiflorum, Modorum, Odoratum, Lacineatum repandum vernum, Lilaceum, and Punctatum. It is almost needless to say that many of these distinctions are very trifling. The principal sorts we recommend to cultivators, are Persicum, Europæum, Repandum, and Coum; and to propagate from seeds and take care of offsets when they appear; though there is no dependence on them, as we have known a plant to go for years without producing one. A very silly practice has been adopted occasionally for the purpose of propagating; that of cutting up the root into pieces; they never make such good plants if they live, and most live only long enough to sell. The sorts are not difficult to seed, if they have air while they are in bloom. With regard to the soil, we have never been particular; but when we had to make it on purpose, we used half loam from the top spit of a meadow well rotted, and the other half leaf mould and dung rotted to mould; if the loam happens not to be sandy, some sand must be added.

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THE HORTICULTURAL GARDENS AND SHOW.

THE prizes at the Horticultural Society's show were numerous, and if we could but make the council understand that they ought to encourage others besides the large growers, there would be a greater diversity of subjects, and some chance of our seeing a few plants naturally grown. In the present arrangements, which appear to contain all the objectionable features of the old society, there are too many classes, and not enough prizes in each. The object is of course to get up a great show, and fit the prizes to the people intended to have them. In every class there are two or three prizes worth having, and these are provided for and taken by the gentlemen's gardeners and nurserymen who, by the quantity they grow, can always beat men who cultivate a smaller number, even if better; but if they could come fourth or fifth in some classes, where there are but three prizes, they are as completely shut out from all benefit as if they were altogether prohibited; so also if in other classes, where there are four or five prizes, they could get only sixth or seventh, there would be nothing for them. In fact, it is an aristocratic society, the prizes of which are intended for wealthy growers and great nurseries; and no man of moderate means is to be encourged to show his productions. The prizes are large, and for great men, and it is almost impossible for the middle class to compete successfully however well they may cultivate their plants. If by any chance one not "in the ring" ventures to produce his plants, their judges are too good and know their business too well to let the good things reach him. In some things we could publish the list of winners as well the day before as the day after. Many, if not the majority of the floral committee were members of the National Society, whose proceedings were so gross that we completely routed them and broke them up, by only exposing the floral frauds to which they lent themselves, in fact to which they were parties. We say of the floral committee, that although some of them are most honorable gentlemen there are other well known persons who year after year used to give themselves certificates of merit in the National Society, and sell for half-a-guinea alleged new plants, inferior to some we already possessed, that might be had for threepence; and some of them have sent out twenty sorts of plants a year for many years, warranting them first-class plants, well knowing that the majority of them was as dead a "take in" as a counterfeit sovereign. They grow plants well, and good many of them, therefore, they can make a great show. This induces the managers to pander to their cupidity, for those who rule in these matters never consider the consequences. They may not know and do not care that hundreds of smaller collections are prevented from being exhibited by the utter hopelessness of justice where such men take a lead. The Horticultural Society think them proper persons to have the disposal of their certificates of merit, and men to be judges. There certainly is nothing like variety and contrast. They enroll among their members some of the most noble-minded as well as noble-born in the

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land, and some that have long subsisted on victimising the inexperienced by the sale of worthless plants at a large price, and with wilfully misrepresenting character. It has more than once been publicly suggested that those who are thus defrauded should prosecute a few of the leaders. We have recently seen two or three examples made in the seed trade, and it is quite time some of the florists were exposed in the same way. However, we have made them more cautious. No matter by what means they obtained horticultural certificates of merit, they cover the criminal part of the transaction, though morally it may be as bad as a highway robbery, for with that in their hand they may plead ignorance. We wish the Horticultural Society well, but those who slur over these manifestly bad features are no friends to its permanence, its usefulness, or its popularity. The only fault we have to find with the gardens is the great expense they will cause the executive to incur in labor to keep the elaborate and well executed work in good order. Let us hope, however, that those who supply the funds will not relax, for if the keeping up be neglected they will be an awful spectacle.

GENERA, SPECIES, VARIETIES, &c.

THE Tyro in botany is often puzzled when he reads of this *genera*, that *species*, the other *variety*, and all sorts of tribes, classes, and families. The attempt to explain them will, perhaps, be acceptable to many of our readers, and not offend those who do not require the information.

A genus, then, is the head of a family—say the genus Pinus, by way of example, which means the whole of the various kinds of Pinus that we know anything about, and many that exist without our knowing them. The word genus will be the correct term to apply when we speak of them all; but in writing or talking we object to repetitions, and therefore apply terms which mean the same thing, as near as we can find them. Thus, if we were to say, "The GENUS PINUS is very extensive, it is one of the most beautiful *families* in cultivation, we hardly know of a handsomer *tribe*." The words *genus*, *family*, and *tribe*, mean the same thing; but it reads and sounds much better than if we were to say, "The GENUS PINUS is very extensive, it is one of the most beautiful GENUSES, we hardly know a handsomer genus." Therefore, when we hear any one talk, or when we read of a *tribe* of plants, or a *family* of plants, it means the whole assemblage that are classed under one *genus*.

A species may be likened to the children of a family, John, Thomas, Richard, William, and a dozen more. It means different plants of the same family, with a very distinctive character, and which distinctive character is retained in the offspring. As, for example, there is a *genus Viola*, and there are very many species; two will answer our purpose as well as a hundred: one species is *Viola Odorata*, the sweet violet familiar to us all; another species is *Viola Tricolour*, which is

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the heartsease; both are of the family of violets, yet they keep very distinct. We never obtain the Heartsease from the seed of the common violet, nor do we get the violet from the seed of the heartsease. Here, then, we have the *genus* or family *Viola*, and the species or children *odorata* and *tricolour*. Now let us describe varieties, which we cannot do better than by pointing out the thousands of different colours, forms, habits, and general appearance of the heartsease; they are all varieties of the *species* heartsease and the *genus* Viola. We find endless changes, but no change to the common violet. So among the common violets, if we saved seed, and raised thousands, if there were by any possibility to be found among them violets of all colours, we should find no heartsease. Whatever varieties there might be, they would all be *varieties* of the *species* odorata, and the *genus* Viola. Such are the distinctions of genera, species, and varieties.

ON BUDDING.

As the season for this operation is close, a few remarks may be acceptable. Buds, to succeed well, ought perhaps always to be inserted in the cool of the evening of damp or hazy days, because evaporation in the first instance, and during two or three of the early days, is the chief fatal agent; secondly, therefore, they should be quickly inserted, and made to press closely and entirely upon the alburnum or sap wood of the stock. Thirdly, they should face away from the mid-day sun, and be shaded, if possible or convenient, by a green leaf tied by its footstalk, and thus suspended in front of them; or by a small body of threshed moss, moistened and secured—but this is apt to induce too much damp, and may harbour insects. Fourthly, the leaf of the bud is of no use; it is the organ of transpiration, and, in the case of roses particularly, ought to be closely cut off, leaving only a portion of its stalk.

Having selected his stocks, the operator is to be provided with a twig of young green wood, furnished with plump eyes, a sharp budding-knife, with its ivory-flattened haft, and some strings of new bass, from eighteen inches to two feet long; these shreds should be tough, yet soft, half an inch broad, and strong enough to bear a good twitch, for it is extremely tantalizing, and not without danger, that a binder fails and snaps short off just at the critical moment of tying, as sometimes the stock is broken by the force of the jerk thus caused. These strips of bass should be placed in a vessel containing water, and taken out wet one by one as required. If the stocks be young—and such are the young fiplum trees for peaches, the quinces and pear-stocks for pears, &c.—the budder should stand on the south or south-west side of the stock, and, bending it towards him, lean over it whilst he cuts the bark on the north side, and performs all the other operations. If it be a standard, as in the case of a tall wild rose-stock, he must stand in front of it, as also if the tree be growing close to a fence or wall; but, if a choice position can be commanded, there will be more freedom in operating by leaning over the work.

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All being ready, let the bud be selected, and cut off by an inward cut from half to one inch below to half an inch above it, bringing off so much of the wood as will secure the internal eye and pith of the bud. Insinuate the point of the knife under the scale of wood at its lower end, and gradually coax or draw it off upwards. If the eye of the bud remain and project inwards a little, the work has been duly performed; but if a cavito be seen the eye has parted and gone away with the woody fibre, and the bud, being thus deprived of its pith and alburnum, is imperfect. Roses do not require this detaching of the wood, nor perhaps does any very juicy bud or shield; but no dry fibrous wood can ever be admitted. The bud being ready, and held between the lips, let the incisions be made in a free smooth part of the scion, and the bark opened boldly and widely at each edge; with the haft held in the left hand, keep the cleft fully open, and with the right hand lay the shield with its bud truly on and in complete contact with the wood, but with its extreme top a hint above the edge of the cross top-cut of the stock; then, with the fingers, press the edges of the bark correctly over the inserted shield, and cut off its top exactly at the cross-cut. Thus a fresh juicy surface of the bark will meet the under edge of the bark of the stock. Pressing the wounded parts gently, pass a ligature once round below the incision, wrap it over itself, confine the one end and coil the remainder; plat, and firmly, over the wound, avoiding the bud, then over the cross-cut, and above, and secure it with two or three simple hitches. If this be managed quickly, not one in a hundred will fail.

CULTIVATION OF THE CAPER PLANT.

The caper plant grows naturally in many parts of the south of France, and a little care causes it to flourish perfectly well in the northern provinces. In autumn, a single digging about the plants is all that they require. In October, in order to afford them shelter, the stems are cut down to within six inches of the ground, and the plants are covered over with the earth of the intermediate spaces. This is the protection they demand during the winter. In spring-time they are again uncovered and trimmed. The old shoots are then covered up to the part where the plant appears to push forth its fresh part, and new shoots are seen. They soon get into flower at the commencement of summer, and continue to bear flowers as long as the freshness of the nights does not restrain the sap. Every morning the buds are gathered, because the largeness of the capers take away from their value. When once they have advanced beyond a moderate size, they are only good for cutting up, having become too hard to be left entire; no matter what precaution may be taken in the gathering, there will always be flowers which escape notice and burst forth. They must then be allowed to go to seed, and when the capsules, still green, and as large as an olive, are advanced enough, they are gathered and preserved. They form what is called the cornichon caper, The daily

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gatherings are thrown into tons of vinegar; salt is added in order to prevent the watery portion of the bud from weakening the vinegar, and different gatherings at last pass into the hands of the commercial pickle-men.

The extreme simplicity of the cultivation necessary for this plant, ought to place it in every garden. When planted near a wall exposed to the south, it will be found to succeed perfectly in this country. In winter it would be wise to cover the plants with matting or straw. Abroad, in large plantations, it is customary to place the plants in the shape of a five of hearts, and at some distance from each other. They multiply very rapidly, and the stems springing from the root, soon become numerous. Hence, it is easy to procure slips from the parent root. These plantations are sure to flourish, as the plant requires but little dryness and heat.

It is not against the law to introduce a fact which is uquestionably connected with the present subject, though it may not add much to the stock of knowledge as to its culture.

On the island of Malta the caper-tree grows wild in great plenty, and is particularly abundant on the walls of Lavalette, which, since the capture of the island, has been the undisputed perquisite of the officer in command of the engineers. Some time ago the officer commanding that corps complained to the governor; stating, that the trees were cut down, and the fruit carried away by the inhabitants, and begging the governor to issue an order for the protection of what he conceived to be his lawful property; upon which, the old facetious gentleman gave out the following ludicrous order:—"Whereas, it has been reported to me, by the officer commanding the engineers, that the inhabitants of Lavalette have for some time past destroyed the fruit, and cut down the caper-trees hanging on the outside of the garrison; it is the command of the governor, that no one in future *cut capers*, either on the top or sides of the walls, except the lieutenant colonel commanding the engineers. Any one found *cutting his capers* on the walls, after this notification, will be confined to the black hole for the first offence; and for a repetition of so flagitious an act, the next *capers they cut* will be their own, at the tail of a calash, to the tune of a cat-o'-nine-tails."—G. P. F.

THE ROSE-BED OF BENGAL.

GHAZEPORE stands upon the north bank of the Ganges, about seventy miles by water below Benares. It is not a very extensive town, but is justly celebrated as the Gul-istan (the rose-bed) of Bengal. In the spring of the year, an extent of miles around the town presents to the eye a continual garden of roses, than which nothing can be more fragrant and beautiful. The sight is perfectly dazzling; the plain, as far as the eye can reach, extending in the same bespangled carpet of red and green. The breezes, too, are loaded with the sweet odour, which is wafted far across the Ganges. The flower is cultivated thus

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extensively for the manufacture of rose-water, that of Ghazepore being justly esteemed as surpassing in excellence every production of the sort. "Whether or not this may be attributable to the superiority of the flowers, or the process of distillation," says a traveller, "I cannot say; but as the roses did not appear to me to possess greater fragrance than others of their class, I should rather refer it to the latter cause, unless, indeed, it be that the wonderful abundance of the material enables them to be more lavish in its decoction than is elsewhere possible." It is no less cheap than excellent; a gallon of the most delicious for seven or eight shillings; they do not, however, understand at Ghazepore the art of distilling the *atr* of roses in the same perfection as the Persians. The spurious compound which they endeavour to palm upon the traveller is weak, and possesses a sickly disagreeable odour, foreign to the rose; but the purchaser is often deceived by a little of the true *atr* being rubbed about the stopper and neck of the bottle. The prices demanded for this miserable imitation are exorbitant; the explanation I received from one of the venders. He assured me that long experience had taught him that it was part of the character of the English to despise everything cheap, and to consider anything choice and excellent which was extravagantly priced. We have seen one account of the mode of collecting the atr, or as some have it, Otto of Roses, and if it be true, we need not wonder at the price of the article: an enormous quantity of rose leaves are thrown into water and stirred about repeatedly; after some hours, perhaps days, of repeated stirring, there will be found at the top of the water a complete oil, in drops and some gathering round the edges. This oil is the true *atr;* it is carefully taken off, and the proportion is so small to the quantity of rose leaves employed, that no one need wonder at the exorbitant price. It might be called the essential oil of roses, for such it in reality is, and a very small bottle of the genuine is worth a guinea. We have never among all our experiments tried to produce the *atr*, but we can readily believe that our information is correct, and that acres of roses are grown for the purpose of producing this enviable perfume. A guinea bottle holds but a few drops, and the scent ought to be placed at the head of all scented things, not even excepting the violet.

A HISTORY OF GARDEN NEWSPAPERS.

In the year 1832 when Mr. Glenny established the Horticultural Journal, and founded the Metropolitan Society of Florists and Amateurs, he was looked up to as one destined to work out great things for floriculture in general. The Horticultural Society of London advertised public shows almost immediately after those of the Metropolitan were announced, and certain it is that from that period to 1840, floriculture was on the ascendant. In 1837 the "Gardeners' Gazette," the first garden newspaper, took the place of the monthly work which Mr. Glenny withdrew when he made a weekly work; the

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Gazette gradually at first, and rapidly afterwards increased in numbers and influence, until meeting with some reverses, he divided the paper into five shares which he sold for £800 each, and a bond of £10 per week for editing. It happened, however, that one of the shareholders interfered with his department, and as this man pleaded his right as proprietor, and frightened the others into sanctioning his interference, Mr. Glenny whose opinion was looked up to as an authority, and who would not have it tampered with by anybody, retired in disgust, though the salary was his sole dependance, and Mr. Loudon was engaged. The paper continued to rise under the original editorship, until Mr, Glenny abandoned it, when the readers left also, and after losing a considerable sum, they sold the paper, damaged in character, destroyed in influence, and deserted by thousands of its readers for £350. Thus, establishing the fact, that Mr. Glenny's writing, though bold, and in cases where it was deemed unusually severe, was the cause of its success, and his retirement, notwithstanding Mr. Loudon's assertions, the cause of its decline. Mr. Glenny was engaged by the purchaser to conduct the Gazette again, upon terms that secured his best services; it soon recovered its influence, and as rapidly bringing back its circulation, in spite of a second garden newspaper; for Mr. Glenny was no sooner out of the field than the "Gardeners' Chronicle," an exact imitation of the Gazette in size, general plan, and every thing but the title, was started by Dr. Lindley. Now the doctor had all the prestige of the Horticultural Society, and the use of their house, their library, and their men, and took care to make the best use of them, so that before Mr. Glenny took the management of the Gazette a second time, the Chronicle had taken the ground which the first newspaper once occupied. In the face of this tremendous rival the Gazette recovered, it was feared and approved as much as ever. At this period, one of the greatest swindles ever attempted was set up in opposition to him. A few of those lazy fellows who fancied they could write, and liked anything better than work, concocted a scheme to plunder all the gardeners who had money, by starting a paper on their behalf, and deceiving all those who could afford to buy a journal, by promising the readers Annuities, in old age, relief in sickness, and assistance to Widows and Orphans, and thus took from the Gazette perhaps a thousand readers, who were silly enough to believe in the promises of the crafty leaders. In vain did Mr. Glenny set forth that the whole thing was a humbug, that no paper in such hands could succeed, and that it would all end in beggary and bankruptcy, as soon as the simpletons who were gulled to sink their money got tired of supplying the drones, for they were paid for writing very wretched stuff, and collecting letters and articles from others who liked to see their names in print; however, the readers fancied how comfortable it would be to have "annuities" when they got old, "relief" when they got sick, and to know that their wives and children would be taken care of if anything serious happened to the head of the family. Mr. Glenny from the first considered it as a cruel fraud, and it turned out such; all who had assisted with their money, lost it, all who had deserted the Gazette to get the promised benefit found they had been

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duped; when all was lost, and they were something like two thousand pounds in debt, they sold the wreck of the paper to a spirited speculator for £250, and *as he continued the same embeciles* to conduct it, all his advertising and other liberal attempts to insure the circulation were futile. The annuity "rig" had exploded, so that the readers who had built upon that dropped off rapidly, and the men who were unable to keep it up while all the promises were believed to be sound, were not very likely to succeed, when the only links that bound them to a despicably bad newspaper had been removed; when the new proprietor's hopes had fled; when he saw that the men who were living upon it were altogether counterfeits, he swamped the paper and turned them all adrift. Then perhaps for the first time he turned to the back numbers, and saw that the whole thing from the first was a sham, and that there had never been a writer worth a barrow boy's pay upon the establishment, from the day it first appeared to its close. A friend of mine invested a considerable sum, that he had been for years saving, and his example induced others; it was in vain that it was urged by myself and others, that Mr. Glenny had shewn himself a willing and earnest advocate of Gardeners' interests, and that I protested against the cruelty, even if it could succeed, of opposing the best friend the practical gardeners ever had. His answer was, "*The gardeners do not like to be dependent on a newspaper in the hands of anybody but themselves.*" They succeeded in destroying their only friend the Gazette, and deceiving everybody who had placed faith in promises *never intended to be fulfilled.* It is said that "man always hates the person he has injured." I would fain hope that it is not so among gardeners. I think there are very few who, if it be brought under their notice, would refuse to take a newspaper on which the friend of the gardener was engaged, and there is certainly no means of rewarding him for past services, so agreeable and so conducive to mutual benefit, as patronizing the Gazette, which he has revived; I believe he has a large portion of amateurs among his readers, but of gardeners he ought to have ALL. They should remember who, in the very teeth of the Horticultural Society's dictum of *twelve shillings per week*, got the wages at the Royal Gardens raised, and laboured till they were improved in all good establishments. They should not forget that Mr. Glenny never lost sight of the one great object, raising gardeners to their proper position in society, and increasing their wages; he abandoned his first, and our first newspaper, because he would not be interfered with, and when he went to it again, he struggled for years against what has since been appropriately called THE JUGGLER'S JOURNAL, and at the very time that a few unprincipled men were conducting the paper that was ruining his, he was labouring as hard as ever in the cause of the British gardener. His hand book to the Flower Garden and Greenhouse has run through several editions. His hand book to the Fruit and Kitchen Garden is out of print, and the last edition of his hand book to Practical Gardening has been highly eulogized by Dr. Lindley, who is not suspected of praising it unjustly, although one fool critisized the review and condemned the book, because he could not find a treatise on the chrysanthemum.

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His papers on this work when Dodwell refused to go on without ten times as much money as he was worth; his "Gardening for Children;" his twenty-four years work in editing "The Garden Almanack;" his nine or ten years' services in "Lloyds;" his articles in "The London Journal" and "Cassel's Illustrated Family Paper," all written in the same spirit, bespeak an energy and originality of mind never exhibited before by any horticultural writer. Loudon was a wonderfully industrious man in compiling, but he was not much in the way of originality. Glenny's are unique; to him belongs all the merit or discredit of the works that bear his name; and if he had written none but "The Properties of Flowers and Plants," that book will last for ever. His late two works are said to be his best, "The Gardeners' Everyday Book," and "The Handy-book on Gardening," the former a complete system for the amateur, and a remembrancer for the man who knows his business; the latter is remarkable for containing the spirit as it were of his previous writings, and in which is now included his "Golden Rules for Gardeners," which ought to be written in gold letters, and hung up in every garden in England. But of all these works, not one is his own copyright, for want of a patron, he worked only for booksellers, and when written they were paid for as booksellers usually pay for work. Here, then, has been thirty-five years of a life spent in hard service for the horticultural world, and the practical gardener in particular, and how requited? Why, those who were most interested in all he wrote, have left him at the mercy of his enemies, "fraudulent showers and dealers," whose nefarious deeds he has exposed, whose dishonest gains he has lessened, and whose bad passions he has excited. I had forgotten one work recently published by Cassell, Petter, and Galpin, "Glenny's Forget me-not," a richly illustrated book, of valuable instruction and amusement, one edition for the servants' hall, and another for the drawing room; this is, I believe, his own copyright, and he is individually better for every copy that is sold, it is dedicated to Lady Rolle, and worthy of its noble patroness, but to do him any good, it should be on every lady's table, and in every gardener's cottage. I fear, however, that the costly way in which it is got up, has made it a loss instead of a gain unless many thousands are sold. Be that as it may, I cannot help thinking that the horticultural world might do something for a man who has devoted thirty-five years of his life to a branch of literature that interests every lover of fruit, flowers, plants, and vegetables. But it appears he has not done writing, for a work which will be still more popular than his "Properties of Flowers" is now in the hands of Mr. Piper the printer. "The Properties of Fruits and Vegetables," will do for those what the other did for flowers; that is, establish a standard for the guidance of judges and exhibitors, scarcely any two of whom can be found to agree, and enable every exhibitor from the cottager to the prince, to place his productions on the table according to the principles on which they are to be judged. Few men could have maintained for thirty-five years an energy and originality of thought which renders every article he writes as fresh, as vigorous, and as entertaining as those written thirty years ago; exposing and wearing out his antagonists one by one, until the only

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enemies he has are the fraudulent dealers and showers, whose trade and tricks he never ceases to expose. At this moment he is contributing to three or four weekly papers, furnishes one or two articles to this periodical, almost entirely writes the twenty-four columns of the "Gardeners' Gazette," yet there are gardeners, and I feel ashamed to say so, who do not read it, though it is the only paper to which a gardener who has been wronged can appeal, the only one in which a letter can be inserted, if it complains of the higher class, the only one in which a gardener can insure the publication of any thing he may desire to communicate to his fellow men. I have heard Mr. CARTON, who was gardener to the Duke of Northumberland say at the time the scheming idlers proposed the "Gardeners' Journal," "*Depend upon it that whoever deserts the Gardeners' Gazette, deserts the best friend we ever had, and when they turn from the Gazette to the Journal they lose the substance to grasp at the shadow,*" and so it proved, but unlike the dog who lost it, the substance still remains, they have only to return to it and find it unimpaired.

Nottingham. A WORKING GARDENER.

[This paper from the locality in which the MIDLAND FLORIST was started, has been read before an intelligent meeting, and to all who have started into gardening life within the last few years must be new.]

TULIP EXHIBITIONS.

ASHTON-UNDER-LYNE, JUNE 3.

THE ORIGINAL TULIP SHOW,—The annual exhibitiou of the Original Ashton Tulip Show, took place at the house of Mr. Thomas Moss, Grapes Inn, Church-street, on Monday last. There was a very good show of flowers notwithstanding that most of the members had suffered considerably through the late frosts. The following is a list of the successful competitors :—

Premier Prize—(Silver Cup)—James Lee, Charles X. and Abercrombie.

2. Pan of Broken Flowers — Richard Mills, Lady Crewe and Abercrombie.

1. Best Breeder Pan. Pair of Carvers, the gift of A. Knott, of Sheffield—James Lee, Sir J. Paxton, Gladson and Olivia.

2. Stand of Breeders—Samuel Stopford, Pilot, Van Amburg and Lady Stanley.

3. Maiden Prize 5s., in Bulbs, the gift of William Lea—Joseph Cock, Charles X.

FEATHERED BIZZARES.—1. James Hilton (Premier), Charles X. 2. James Lee, Lord Lilford. 3. Thomas Moss, Surpass Catafalque. 4. John Moss, Waterloo. 5. John Moss, Magnum Bonum. 6. John Pickering, Commander. 7. Zachariah Peacock, Duke of Devonshire. Samuel Stopford, Duke of Hamilton.

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FEATHERED BYBLOMENS.—1. James Hilton, Bienfait. 2. James Lee, Beauty. 3. James Hilton, Edgar. 4. Joseph Newton, Violet Amiable. 5. James Lee, Lancashire Hero. 6. Joseph Newton, Maid of Orleans. 7. Zachariah Peacock, Unknown. 8. James Buckley, Catharine.

FEATHERED ROSES.—1. Richard Mills, Lady Crewe. 2. John Haigh, Heroine. 3. Joseph Newton, Compt deVirgennes. 4. Robert Alsop, Queen Boadicea. 5. Richard Mills, Andromeda. 6. William Chadwick, Lady Cardigan. 7. Thomas Mellor, Seedling. 8. John Haigh, Lady Grey.

FLAMED BIZZARES.—1. Richard Mills (Premier), Abercrombie. 2. Thomas Mellor, Charles X. 3. Robert Alsop, Polyphemus. 4. James Hilton, Vivid. 5. Richard Mills, Surpass Catafalque. 6. Thomas Mellor, Paul Pry. 7. Thomas Moss, Commander. 8. George Broadbent, Lustre.

FLAMED BYBLOMENS.—1. Thomas Schofield, Lord Denman. 2. Joseph Newton, Nora Creina. 3. Abraham Leech, Van Amburg. 4. Richard Mills, Incomparable, 5. Abraham Leech, Princess Royal. 6. Joseph Newton, Alexander Magnus. 7. Abraham Leech, Violet Wallers. 8. Richard Mills, Lord Vernon.

FLAMED ROSES.—1. Joseph Newton, Aglaia. 2. Joseph Newton; Rose Vesta. 3. John Moss, Rose Unique. 4. Robert Alsop, La Vandyke. 5. James Lee, Celestial. 6. Joseph Cock, Triumph Royal. 7. James Buckley, Lord Hill. 8. Samuel Stopford, Lady Catharine Gordon.

BIZZARE BREEDERS.—1. William Waller, Sir Joseph Paxton. 2. Samuel Stopford, Pilot. 3. John Haigh, Earl Radnor. 4. William Woller, Emperor Nicholas. 5. William Chadwick, Sobraon. 6. John Moss, Lord Darnley.

BYBLOMEN BREEDERS.—1. James Hilton, Earl Warwick. 2. John Moss, Purple Perfection. 3. Richard Mills, Maid of Orleans. 4. James Wild, Duke of Grafton. 5. William Chadwick, Lucy Ashton. 6. John Moss, Sancta Sophia.

ROSE BREEDERS.—1. Joseph Newton, Juliet. 2. Samuel Stopford, Lady Stanley. 3. James Hilton, Madam St. Arnaud. 4. James Lee, Industry. 5. Abraham Leech, Magnificent. 6. James Lee, Seedling.

WHITE SELF.—1. Samuel Stopford, White Perfection.

YELLOW SELF.—1. William Chadwick, Model.

The judges were Messrs. John Knowles, Samuel Shawcross, and John Sidley.

AUDENSHAW, MAY 31.

On Friday evening a Tulip Show took place at the house of Mr, Thomas Schofield, the "Blue Pig" Inn, when there was an excellent display of Flowers. The following is a list of the prizes:—

PREMIER PRIZES.—1. T. Schofield, Sanzoe. 2. R. Alsopp, Charles X.

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FEATHERED BIZZARES.—1. R. Alsopp, Charles X. 2. A. Leech, Magnum Bonum. 3. J. Knott. Surpass Catafalque. 4. J. Knott, Apollo. 5. J. Buckley, Waterloo. 6. N. Hall, Elizabeth. 7. T. Moss, Duke of Devonshire. 8. J. Knott, Venture.

FEATHERED BYBLOMENS.—1. R. Alsopp, Beauty. 2. H. B. Cowburn, Bienfait. 3. H. B. Cowburn, Sir Henry Pottinger. 4. A. Leech, Amiable. 5. R. Alsopp, Lancashire Hero. 6. T. Moss, Edgar. 7. R. Alsopp, Orleans. 8. J. Knott, Violet Winner.

FEATHERED ROSES.—1. J. Knott, Lady Crewe. 2. R. Alsopp, Newcastle. 3. J. Knott, Heroine. 4. T. Mather, Count. 5. T. Schofield, Lady Lilford. 6. H. B. Cowburn, Andrew Needham. 7. J. Knott, Lady Stanley. 8. T. Mather, Kate Connor.

FLAMED BIZZARES.—1. T. Schofield, Sanzoe. 2. S. Buckley, Charles X. 3. R. Alsopp, Polyphemus. 4. R. Alsopp, Paul Pry. 5. N. Harrop, Esq., Pilot. 6. J. Knott, Taff. 7. N. Harrop, Esq. Waterloo. 8. J. Hall, Lecantique.

FLAMED BYBLOMENS.—1. W. Clayton, Esq., Buckley's Fame. 2. A. Leech, Bacchus. 3. N. Clayton, Esq., Denman. 4. J. Kott, Magnus. 5. R. Alsopp, Count. 6. R. Alsopp, Lord Vernon. 7. T. Ogden, Bienfait. 8. A. Leech, Van Amburg.

FLAMED ROSES.—1. A. Leech, Unique. 2. W. Clayton, Esq., Aglaia. 3. J. Buckley, Levandikin. 4. J. Gregory, Aglaia. 5. J. Buckley, Triumph Royal. 6. W. Clayton, Esq., Vesta. 7. N. Harrop, Esq., Andican. 8. J. Knott, Seedling.

BIZZARE BREEDERS.—1. H. B. Cowburn, Radnor. 2. J. Buckley, Unknown. 3. A. Leach, Paxton. 4. T. Schofield, No. 13. 5. R. Alsopp, Captain Nolan. 6. J. Buckley, Polly.

BYBLOMEN BREEDERS.—1. J. Hall, Goldsmith. 2. A. Leech, Sancta Sophia. 3. S. Gregory, Sutherland. 4. W. Clayton, Esq., Hamburgh. 5. W. Clayton Esq., Unknown. 6. H. B. Cowburn, Unkown.

ROSE BREEDERS.—1. J. Ogden, Juliet. 2. W. Clayton, Esq., Lord Derby. 3. A. Leech, Amelia. 4. J. Buckley, Village Maid. 5. W. Clayton, Esq., Henrietta. 6. T. Mather, Kate Connor.

Yellows—J. Buckley. Whites—R. Alsopp.

The judges were Mr. Joseph Oldham. of Mottram; Mr. W. Harrison, of Denton; and Mr. W. Wooler, of Ashton.

HYDE, JUNE 1st.

NORTH CHESHIRE TULIP SHOW.—On Saturday last, the Fourteenth Annual Tulip Show of the above Society took place at the house of Mr. John Goddard, the "Sportsman's" Inn, Mottram-road, when a goodly number of Flowers were shown. The prizes were as follows:—

1. (Silver Cup), —. Peacock, Esq., Edgar and Mabel. 2. Mr. John Hall, Unique. 3. Mr. John Brierley (Maiden Prize), Duke of Devonshire.

FEATHERED BIZZARES.—1. W. Shelmerdine, Charles X. 2. John Goddard, Sir Sydney Smith. 3. Thomas Harrison, Masterpiece. 4. J. Peacock, Esq., Paul Pry. 5. John Sidley, Duke of Devonshire.

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6. John Sidley, Surpass Catafalque. 7. Thomas Harrison, Colbert. 8. John Peacock, Esq., Napoleon.

FEATHERED BYBLOMENS.—1. W. Shelmerdine, Sir Henry Pottinger. 2. John Sidley, Washington. 3. W. Peacock, Esq., Lord Denman. 4. Thomas Leech, Violet Amiable. 5. James Miller, Edgar. 6. W. Peacock, Esq., Prince Albert. 7. W. Peacock, Esq., Bienfait. 8. J. Peacock, Esq., Sable Monarch.

FEATHERED ROSE.—1. Thomas Harrison, Heroine. 2. Sampson Ardern, Lady Crewe. 3. John Sidley, Aglaia. 4. W. Peacock, Esq., Julia Farnese. 5. J. Peacock, Esq., Queen Eleanor. 6. J. Peacock, Esq., Jupiter. 7. J. Peacock, Esq., Ada. 8. Thomas Leech, Andromeda.

BIZZARE BREEDERS.—1. W. Peacock, Esq., Paxton. 2. Thomas Thomas Harrison, Earl Radnor. 3. Sampson Ardern, Duke of Hamilton. 4. Thomas Harrison, Pilot. 5. John Sidley, King. 6. Thomas Harrison, Hector.

BYBLOMEN BREEDERS.—1. J. Peacock, Esq., Earl Warwick. 2. W. Peacock, Esq., Denman. 3. J. Peacock, Esq., Chancellor. 4. Sampson Ardern, Miss Forrest. 5. W. Peacock, Esq., Martin's No. 14. 6. Thomas Leech, Sancta Sophia.

FLAMED BIZZARES.—1. W. Peacock, Esq., Paul Pry. 2. Sampson Ardern, Polyphemus. 3. W. Peacock, Esq., Sanzoe. 4. John Sidley, King. 5. Thomas Harrison, Pilot. 6. W. Peacock, Esq., Duke of Devonshire. 7. W. Shelmerdine, Charles X. 8. W. Shelmerdine, Surpass Lecanque.

FLAMED BYBLOMENS.—1. W. Peacock, Esq., Magnus. 2. Sampson Ardern, Gibbons. 3. W. Peacock, Esq., Orleans. 4. W. Peacock, Esq., Flora. 5. Sampson Ardern, Violet Wallers. 6. W. Peacock, Esq., Bacchus. 7. Sampson Ardern, Bienfait, Sable Monarch. 8. Sampson Ardern, Bienfait.

FLAMED ROSE.—W. Peacock, Esq., Aglaia. 2. John Hall, Unique. 3. Sampson Ardern, Vesta. 4. W. Peacock, Esq., Lady Suffield. 5. Sampson Ardern, Ariadne. 6, Sampson Ardern, Laandicker. 7. Sampson Ardern, Triumph Royal. 8. J. Baxendale, Lord Hill.

ROSE BREEDERS.—1. W. Peacock Esp., Juliet. 2. Thomas Harrison, Celestial. 3. J. Peacock, Esq., Mabel. 4. J. Peacock, Esq., (Seedling) Annie. 5. Thomas Harrison, Industry. 6. W. Peacock, Esq., Village Maid.

The Judges were Mr. David Potts, of Bollington; Mr. Joseph Oldham, the Hague, near Mottram; and Mr. Knott, of Gorton, and whose awarding of the prizes appeared to give general satisfaction to the members of the society.

ASHTON-UNDER-LYNE, MAY 31ST.

Mr. Evan Hall, "Boar's Head."

JUDGES.—Mr. Robert Taylor, (Glodwisk); Mr. Samuel Schawcross, Ashton. The following are the Awards, viz.:—

PREMIER PRIZE, Silver Cup—Mr. James Hilton, Charles X. and Sanzoe. 2.—Mr. James Lee, Beauty and Sanzoe.

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BEST BREEDER PAN.—Mr. Joseph Newton (Willison's), King, Sancta, Sophia, and Olivia. 2.—Mr. James Wild, Ariosto, Chancellor, and Lady Stanley.

FEATHERED BIZZARES.—1. Mr. James Hilton, Charles X. 2. Thomas Mellor, Magnum Bonum. 3. James Lee, Duke of Devonshire. 4. John Hilton, Apelles. 5. James Hilton, Waterloo. 6. John Hilton, Rising Sun. 7. James Wild, Lord Lilford. 8. Joshua Wood, Sir Rowland Hill.

FEATHERED BYBLOMENS.—1. James Lee, Beauty. 2. James Lee, Edgar. 3. Thomas Mellor, Bienfait. 4. Joseph Newton, Louis XVI. 5. John Haigh, Midland Beauty. 6. James Wild, Incomparable. 7. John Haigh, Violet Amiable. 8. James Wild, Delight.

FEATHERED ROSES.—1. James Lee, Aglaia. 2. James Hilton, Lady Crewe. 3. James Buckley, Heroine. 4. James Lee, Mary Lamb. 5. Joseph Newton, Compte. 6. James Hilton, Andromeda. 7. Thomas Mellor, Seedling. 8. William Chadwick, Lady Cardigan.

FLAMED BIZZARES.—1. James Lee, Abercrombie. 2. James Wild, Paul Pry. 3. Thomas Mellor, Charles X. 4. James Hilton, Rising Sun. 5. James Lee, Duke of Devonshire. 6. William Chadwick, Pilot. 7. Joseph Cock, Waterloo. 8. George Broadbent, Lustre.

FLAMED BYBLOMENS.—1. Joseph Newton, Incomparable. 2. John Haigh, Violet Amiable. 3. Joseph Newton, Bienfait. 4. James Wild, Lord Denman. 5. Thomas Mellor, Van Amburg. 6. James Lee, Queen of Violets. 7. Joshua Wood, Princess Royal. 8. William Chadwick, Sportsman.

FLAMED ROSES.—1. Thomas Mellor, Rose Unique. 2. Joseph Newton, Rose Vesta. 3. Joseph Newton, Aglaia. 4. James Wild, Celestial. 5. Joseph Newton, Compte. 6. Thomas Mellor, Vainqueur. 7. James Wild, Magnificent. 8. Thomas Mellor, Lady Catherine Gordon.

BIZZARE BREEDERS.—1. James Wild, Ariosto. 2. Thomas Mellor, Sir Joseph Paxton. 3. James Wild, Earl Radnor. 4. James Lee, (Martin's) No. 28. 5. James Buckley, Pilot. 6. John Haigh, Truth.

BYBLOMEN BREEDERS.—1. John Haigh, Lord Denman. 2. James Lee, Sancta Sophia. 3. James Wild, Polonius. 4. James Wild, Chancellor. 5. Thomas Mellor, Martin's Seedling. 6. James Wild, Maid of Orleans.

BEST WHITE SELF.—1. William Chadwick, White Flag.

BEST YELLOW SELF.—1. John Haigh, Min d'Orr.

ROSE BREEDERS.—1. James Lee, Lord Derby. 2. James Wild, Juliet. 3. James Wild, Battersby's Gem. 4. James Wild, Lady Stanley. 5. John Haigh, Miss Boot. 6. Thomas Mellor, Agnes Strickland.

ASHTON-UNDER-LYNE FLORAL AND HORTICULTURAL SOCIETY.

JUST ten years have elapsed since the "Ashton-under-Lyne Floral and Horticultural Society," held an exhibition of fruit, plants, and

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flowers, in the Town Hall; and now we have the pleasure of recording the resuscitation of the society, under able and energetic leaders, and the holding of its first show, which may be justly characterised as one of the most splendid ever held in the borough. The exhibition proved a decided success in almost every particular. One regret only have we to make. We are sorry that time cannot be given so that the working classes could feast their eyes on the "things of beauty" which are thus so liberally brought together. Working men of superior taste and intelligence would undoubtedly visit the show, and such men are now very numerous. If the exibition could only remain open another hour, say till seven o'clock, scores would visit it who are now deterred.

The next show will be held about six weeks from hence. That which immediately concerns us is Tulips.

FEATHERED BIZZARES.—1. James Hilton, Charles X. 2. Thomas Mellor, Esq., Sir Sydney Smith. 3. John Peacock, Esq., Lord Silford. 4. John Sidley, Surpass Catefalque. 5. John Sidley, Duke of Devonshire. 6. John Haigh, Royal Gem. 7. John Peacock Esq., Masterpiece. 8. Edwin Whittaker, Esq., Paul Pry.

FEATHERED BYBLOMENS.—James Hilton, Bienfait. 2. James Lee, Lancashire Hero. 3. Thos. Mellor, Mrs. Pickerill. 4. James Lee, Beauty. 5. John Peacock, Esq., Edgar. 7. James Lee, Amiable. 7. Samuel Shawcross, Chellaston. 8. William Peacock, Esq., Sir H. Pottinger.

FEATHERED ROSE OR CHERRY.—1. William Clayton, Heroine. 2. James Lee, Lady Crewe. 3. Thos. Mellor, Seedling. 4. William Chadwick, Aglaia. 5. John Sidley, Lady Cardigan. 6. John Haigh, Lady Grey. 7. James Hilton, Andromeda. 1. John Peacock, Esq., Jupiter.

FLAMED BIZZARES.—1. James Wild, Sanzoe. 2. Thomas Moss, Polyphemus. 3. William Peacock, Esq., Don Cossack. 4. James Miller, Charles X. 5. James Hilton, Vivid. 6. Edwin Whittaker, Vaughandale. 7. John Peacock, Esq., King. 8. William Peacock, Esq., Pilot.

FLAMED BYBLOMENS.—1. Joseph Newton, Nora Creina. 2. Joseph Newton, Alexander Magnus. 3. Thomas Moss, Lord Denman. 4. Joseph Newton, Violet Wallers. 5. William Peacock, Esq., Salvator Rosa. 6. William Peacock, Esq., Flora. 7. James Wild, Van Amburg. 8. James Lee, Queen Adelaide.

FLAMED ROSE OR CHERRY.—1. John Sidley, Agalia. 2. Joseph Newton, Vesta. 3. William Peacock, Esq., Unique. 4. Thomas Moss, La Vandikken. 5. John Sidley, Triomphe Royale. 6. J. Sidley, Lady C. Gordon. 7. Thomas Moss, Clandiana. 8. William Peacock, Esq., Rose Celestial.

William Chadwick, Best White Self, White Flag. William Chadwick, Best Yellow Self, Model.

BEST BIZZARE BEERDERS.—1. James Lee, Ashmoles Seedling. 2. William Chadwick, Sobraon. 3. Joseph Newton, Emperor Nicholas. 4. John Haigh, Earl Radnor. 5. Thomas Leech, Pilot. 6. John Hollingworth, Elizabeth. 7. John Peacock, Esq., Sir Joseph Paxton 8. Thomas Moss, Prester John.

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BEST BYBLOMEN BREEDERS.—1. James Lee, Mr. Gladstone. 2. William Peacock, Lord Denman. 3. William Peacock, Esq., Miss Forrest. 4. William Clayton, Van Amburgh. 5. James Wild, Purple Perfection. 6. William Chadwick, Orleans. 7. John Peacock, Esq., Earl of Warwick. 8. W. Pickering, Duke of Grafton.

BEST ROSE BREEDERS.—1. William Peacock, Esq., Juliet. 2. Joseph Newton, Lord Derby. 3. William Peacock, Esq., Arlette. 4. John Peacock, Esq., Martin's No. 11. 5. James Lee, Olivia. 6. James Lee, Seedling. 7. Thomas Moss, Queen of Prussia. 8. John Haigh, Industry.

PLANTS.—John Whittaker, Best Stove Plant. 2. John Whittaker. 3. G. Hadwen. 4. E. Chadwick. 5. John Whittaker. John Whittaker, Best Greenhouse plant. 2. John Whittaker. 3. G. Mellor, Esq. 4. G. Hadwen. 5. Thomas Mason. Thomas Mason, Best Azalea. 2. E. Chadwick. S. Pots, Best Herbaceous plant, hardy grown. 2 and 3. W. Chadwick. 4. A. Buckley. 5. W. Chadwick, 6. E. Chadwick. George Ashworth, Esq., Best light Geranium. John Whittaker, Esq., Best Rose Geranium. 2. Orlando Booth. Mrs. Buckley, Best Fancy Geranium. 2. Ditto. 3. John Whittaker. George Ashworth, Esq., Best Calceolaria. 2, 3, 4, and 5. S. Potts. 6. O. Booth. John Nield, Best Cineraria. 2. W. Tipping. 3. G. Hadwen. 4 and 5. E. Chadwick, Esq. 6. John Nield, Esq. John Whittaker, Esq., Best hardy-grown Shrub. 2 and 3. Edward Chadwick, Esq. G. Hadwen, Esq., Best Six Ferns. 2. John Nield, Esq. 3. George Mellor, Esq. 4. J. Whittaker, Esq. G. Hadwen, Esq., Best Single Fern. 2. Ditto. 3. John Whittaker, Esq. James Knott, Esq., Best Brace of Cucumbers. 2. Ditto. 3. Mrs. Buckley. John Whittaker, Esq., Best Kidney Beans, J. Nield, Best ornamental plants (six). 2. E. Chadwick. 3. John Nield. 4. Geo. Mellor. John Whittaker, Best single plant. 2 and 3. John Nield. Mrs. Buckley, Best dish of Mushrooms. 2. Thomas Mellor. Giles Davies, Best brace of Cabbages. 2. John Whittaker. W. Chadwick, Best brace of Lettuce. 2. Thomas Mellor. G. Hadwen, Best Strawberries. 2. Ditto. 3. T. W. Mellor. J. H. Harrison, Best New Potatoes. 2 and 3. George Mellor. James Buckley, Taunton, Best three sticks of Rhubarb. 2. Edward Chadwick. 3. James Worrall. John Nield, Best basket of plants. 2. John Whittaker. John Nield, best Boquest of Flowers in glasses. 2. John Whittaker. 1 and 2. Mr. Hadwen, Lycopediums. 3. George Mellor.

SANDBACK, MAY 25TH.

At the House of Mr. Joseph Dickinson, "Wheat Sheaf" Inn.
JUDGE.—Mr. Samuel Allcock, Seedsman, Sandback.

PREMIER PRIZE.—W. Downing, Heroine and Sanzoe.

MAIDEN PRIZE.—C. Downing, Charles X. and Sanzoe.

BEST PAN OF BREEDERS.—G. Carless, King, Willison's Juliet, Willison's Britannia.

BEST FEATHERED FLOWER.—T. Aimson, Bizzare Seedling. 2. G. Blackshaw, Charles X.

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BEST FLAMED FLOWER.—P. Johnson, Sanzoe. 2. C. Johnson, Sanzoe.

FEATHERED BIZZARES.—1. W. Downing, Devonshire. 2. W. Downing, Charles X. 3. T. Aimson, Unknown. 4. C. Downing, Devonshire. 5. G. Carless, Devonshire. 6. C. Downing, Charles X. 7. C. Downing, Waterloo. 8. J. Owen, Waterloo.

FLAMED BIZZARES.—1. J. Owen, Charles X. 2. C. Johnson, Charles X. 3. C. Johnson, Vivid. 4. J. Owen, Duke of Lancaster. 5. J. Owen, Rufus. 6. C. Johnson, Sanzoe. 7. W. Downing, Conqueror. 8. C. Downing, Devonshire.

BYBLOMENS FEATHERED.—1. C. Johnson, Bagguet. 2. T. Aimson, Elegance. 3. W. Downing, Roland. 4. W. Downing, Bienfait. 5. C. Johnson, Cupid. 6. T. Aimson, Maid of Athens. 7. C. Downing, Bienfait. 8. T. Aimson, Lady Denman.

BYBLOMENS FLAMED.—1. T. Aimson, Princess Royal. 2. J. Owen, Princess Royal. 3. C. Johnson, Violet Quarto. 4. G. Blackshaw, Prince Albert Reids. 5. T. Aimson, Reubens. 6. C. Johnson, Lord Denman. 7. J. Owen, Lucy Neal. 8. C. Johnson, Prince Albert Reids.

FEATHERED ROSES.—1. C. Downing, Heroine. 2. T. Aimson, Mary Lamb. 3. C. Johnson, Heroine. 4. W. Downing, Heroine. 5. C. Downing, Lady Crewe. 6. G. Blackshaw, Lady Crewe. 7. C. Johnson, Lady Crewe. 8. C. Johnson, Lady Crewe.

FLAMED ROSES.—1. W. Downing, Aglaia. 2. G. Blackshaw, Aglaia. 3. G. Blackshaw, Alice Grey. 4. G. Blackshaw, Alice Grey. 5. William Downing, La Van Dakin. 6. C. Downing, La Van Dakin. 7. W. Downing, Aglaia. 8. C. Johnson, Aglaia.

BREEDER BIZZARE.—1. W. Downing, King (Willison). 2. C. Johnson, King (Willison). 3. W. Downing, King (Willison). 4. G. Blackshaw, Duke of Kent. 5. G. Carless, King (Willison). 6. W. Downing, Sir J. Paxton (Willison).

BYBLOMENS.—1. G. Carless, Earl of Warwick. 2. G. Carless, Alpha. 3. W. Downing, Queen (Willison's). 4. W. Downing, Gem. 5. W. Downing, Chancellor (Battersby's). 6 C. Downing, Sancta Sophia.

ROSES.—1. W. Downing, Juliet (Willison's). 2. W. Downing, Juliet (Willison's). 3. W. Downing, Juliet (Willison's). 4. C. Johnson, Miss Catharine. 5. C. Johnson, Lady Catharine Gordon. 6. G. Carless, Lady Catharine Gordon.

SELF YELLOW.—1. C. Downing, Model. 2. W. Downing, Model.

WHITES.—1. C. Downing, Perfection. 2. W. Downing, Perfection.

THE NORTHERN COUNTIES GRAND ANNUAL EXHIBITION OF TULIPS.

Held at the house of Mr. Thomas Heyes, the "Copenhagen Gardens," Newton Heath, near Manchester, on Thursday, May 30th, 1861.

Judges.—Mr. Thomas Leach, Mr. Ralph Howarth, and Mr. William Woller. Hon. Secretary, Mr. Henry Travis, Park Road, Royton, Oldham.

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First Pan of Six Rectified Tulips—Mr. William, with Charles X, Mrs. Pickering, Heroine, San Joe, Bacchus, and Aglaia.

Second Pan of Six Rectified Tulips—Mr. Samuel Barlow, with Soverign, Maid of Orleans, Count, Sanzoe, Bacchus, and Aglaia.

First Pan of three Breeder Tulips—Mr. William Lea, with Seedling, Seedling, and Pilot.

Second Pan of three Breeder Tulips—Mr. William Lea, with Van Amburg, Emperor Nicholas, Lord Derby.

Feathered Bizzares.—1. John Morris, Charles X. 2. Wlliiam Lea, Lord Lilford. 3. William Lea, Surpass Cat. 4. William Lea, Sir Joseph Paxton. 5. William Lea, Lord Byron. 6. William Lea, Masterpiece. 7. Samuel Stead, Seedling. 8. Samuel Bromley, Apelles. 9. Samuel Barlow, Devonshire. 10. Samuel Barlow, Lord Guilford Dudley. 11. William Lea, Colbert. 12. John Walker, Prince Albert.

Flamed Bizzares.—W. Whitaker, Sanszoe. 2. W. Lea, Charles X. 3. S. Stead, Pilot. 4. H. Steward, Polyphemus. 5. W. Lea, Duke of Devonshire. 6. J. Morris, Don Cossack. 7. W. Lea, Goldhams Rising Sun. 8. W. Lea, Harold. 9. Jno. Thorniley, Grooms Orpheus. 10. A. Tomlinson, Rising Sun. 11. D. Potts, Sir Joseph Paxton. 12. J. Morris, Lustre.

Bizzare Breeders.—1. W. Lea, Sir Joseph Paxton. 2. J. Morris, Seedling. 3. S. Barlow, Boardsman, No. 1. 4. T. Salt, Seedling. 5. Jno. Walker, Seedling, Atlantic. 6. S. Stead, Seedling. 7. S. Barlow. Emperor Nicholas. 8. S. Barlow, Ashmoles, No. 1.

Feathered Byblomens.—1. J. Morris, Chellaston Beauty. 2. W. Lea, Violet Amiable. 3. W. Lea, Adonis. 4. W. Lea, Maid of Orleans. 5. H. Steward, Sable Monarch. 6. J. Hart, Edgar. 7. S. Brooke, Beauty. 8. W. Whitaker, Bride. 9. J. Heapy, Defiance. 10. S. Barlow, Maid of Athens. 11. S. Barlow, Surpassant. 12. J. Morris, Bagquet.

Flamed Byblomens.—1. W. Whitaker, 'Atlas. 2. W. Clayton, Lord Denman. 3. D. Potts, Bacchus. 4. S. Stead, Van Amburgh. 5. S. Stead, Gibbons. 6. S. Barlow, Queen Charlotte. 7. S. Barlow, Maid of Orleans. 8. D. Potts, Alexander Magnus. 9. D. Potts, Lord Vernon. 10. W. Lea, Violet Amiable. 11. D. Potts, Beauty. 12. D. Potts, Pyramid.

Byblomen Breeders.—1. J. Hart, Seedling, 2. W. Lea, Bridesmrid. 3. W. Whitaker, Seedling. 4. S. Stead, Duches of Sutherland. 5. S. Stead, Seedling. 6. D. Potts, Queen, Willison. 7. S. Stead, Seedling. 8. W. Lea, Emma.

Feathered Roses.—1. W. Lea, Heroine. 2. W. Lea, Heroine. 3. W. Lea, Lady Crewe. 4. S. Barlow, Count. 5. Jno. Walker, Hero of the Nile. 6. J. Morris, Andromeda. 7. W. Lea. Lady Lilford. 8. S. Stead, Aglaia. 9. J. Hart, Walworth. 10. W. Whitaker, Mrs. Lea. 11. S. Barlow, Bion. 12. J. Slater, Claudianna.

Flamed Roses.—1. S. Stead, Aglaia. 2. D. Potts, Lady Catherine Gordon. 3. T. Salt, Aglaia. 4. D. Potts, Unique. D. Potts, Vesta. 6. W. Clayton, Anastatia. 7. W. Lea, La Vandicken. 8. A. Tomlin-

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son, Triumph Royal. 9. S. Barlow, Celestial. 10 D. Potts, Count. 11. D. Potts, Ponceau Brilliant. 12. W. Clayton, Kate Connor.

Rose Breeders.—1. W. Lea, Seedling. 2. S. Stead, Juliet. 3. W. Lea, The Bride. 4. S. Barlow, Lord Derby. 5.S. Stead, Seedling. 6. S. Barlow, Celestial. 7. W. Lea, Ann Hathaway. 8. S. Barlow, Arlette.

WATERLOO TULIP SOCIETY.

The members of this Society, held their annual show at the house of Mr. Thomas Rolley. the flowers exhibited, considering the show was confined to cottage growers, were of a superior class.

The judges were Mr. J. Faulkner, Mr. W. Chadwick, and Mr. John Hilton. The following is a list of prize-holders:—

Maiden Prize—T. Rolley, Charles X.

Feathered Premium—H. Housley, Charles X. (silver cup.)

Flamed Premium—J. Hulme, Lord Denman (set of China).

Feathered Bizzares.—1. H. Houseley, Charles X. 2. T. Rolley, Charles X. 3. R. Leah, Devonshire. 4. H. Houseley, Magnum. 5. H. Houseley, Dutch Cat. 6. T. Rolley, Lord Lilford. 7. J. Turner, Apelles. 8. R. Leah, Crown Prince.

Flamed Bizzares.—1. J. Turner, Sanzoe. 2. J. Hulme, Sanzoe. 3. J. Hulme, Lancaster. 4. J. Hulme, Polyphemus. 5. W. Lambert, 6. H. Houseley, Merit. 7. T. Rolley, Lustre. 8. T. Rolley, Paul Pry.

Feathered Byblomens.—1. J. Bakewell, Edgar. 2. H. Houseley, Delight. 3. J. Bakewell, Bienfait. 4. T. Rolley, Maid of Orleans. 5. J. Clarke, Violet Winner. 6. J. Hulme, Beauty. 7. H. Houseley, Violet Amiable. 8. T. Rolley, Baguet.

Flamed Byblomens.—1. J. Hulme, Lord Denman. 2. R. Hopwood, Lord Denman. 3. R. Hopwood, Bacchus. 4. J. Hulme, Violet Waller. 5. W. Lambert, Van Amburgh. 6. J. Turner, Alexander. 7. T. Bullock, La Belle Narene. 8. H. Houseley, Anastatia.

Feathered Roses.—1. J. Turner. Heroine. 2. J. Turner, Heroine. 3. H. Houseley, Lady Crewe. 4. W. Lambert, Compt. 5. T. Rolley, Anastatia. 6. H. Houseley, Newcastle. 7. H. Houseley, Aglaia. 8. T. Bullock, Unknown.

Flamed Roses.—1. J. Turner, Aglaia. 2. J. Waring, Unknown. 3. J. Bakewell, Unique. 4. W. Lambert, Aglaia. 5. H. Houseley, Vesta. 6. T. Bullock, Triomphe Royale. 7. R. Leah, Lady Crewe. 8. S. Hulme, Wallworth.

Bizzare Breeders.—1. W. Lambert, Sir J. Paxton. 2. J. Hulme, Polyphemus. 3. H. Houseley, Hamilton. 4. H. Houseley, Charbonier.

Byblomen Breeders.—1. J. Turner, Maid of Orleans. 2. H. Houseley, Sutherland. 3. J. Turner, Sancta. 4. H. Houseley, Delicate.

Rose Breeders.—1. J. Hulme, Arlette. 2. J. Hulme, Baterby's Gem. 3. J. Hulme, Village Maid. 4. J. Bakewell, Juliet.

Selfs.—1. J. Turner. 2. R. Leah.

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First Pan of Six Rectified Tulips—Mr. William, with Charles X, Mrs. Pickering, Heroine, San Joe, Bacchus, and Aglaia.

Second Pan of Six Rectified Tulips—Mr. Samuel Barlow, with Soverign, Maid of Orleans, Count, Sanzoe, Bacchus, and Aglaia.

First Pan of three Breeder Tulips—Mr. William Lea, with Seedling, Seedling, and Pilot.

Second Pan of three Breeder Tulips—Mr. William Lea, with Van Amburg, Emperor Nicholas, Lord Derby.

FEATHERED BIZZARES.—1. John Morris, Charles X. 2. William Lea, Lord Lilford. 3. William Lea, Surpass Cat. 4. William Lea, Sir Joseph Paxton. 5. William Lea, Lord Byron. 6. William Lea, Masterpiece. 7. Samuel Stead, Seedling. 8. Samuel Bromley, Apelles. 9. Samuel Barlow, Devonshire. 10. Samuel Barlow, Lord Guilford Dudley. 11. William Lea, Colbert. 12. John Walker, Prince Albert.

FLAMED BIZZARES.—W. Whitaker, Sanszoe. 2. W. Lea, Charles X. 3. S. Stead, Pilot. 4. H. Steward, Polyphemus. 5. W. Lea, Duke of Devonshire. 6. J. Morris, Don Cossack. 7. W. Lea, Goldhams Rising Sun. 8. W. Lea, Harold. 9. Jno. Thorniley, Grooms Orpheus. 10. A. Tomlinson, Rising Sun. 11. D. Potts, Sir Joseph Paxton. 12. J. Morris, Lustre.

BIZZARE BREEDERS.—1. W. Lea, Sir Joseph Paxton. 2. J. Morris, Seedling. 3. S. Barlow, Boardsman, No. 1. 4. T. Salt, Seedling. 5. Jno. Walker, Seedling, Atlantic. 6. S. Stead, Seedling. 7. S. Barlow. Emperor Nicholas. 8. S. Barlow, Ashmoles, No. 1.

FEATHERED BYBLOMENS.—1. J. Morris, Chellaston Beauty. 2. W. Lea, Violet Amiable. 3. W. Lea, Adonis. 4. W. Lea, Maid of Orleans. 5. H. Steward, Sable Monarch. 6. J. Hart, Edgar. 7. S. Brooke, Beauty. 8. W. Whitaker, Bride. 9. J. Heapy, Defiance. 10. S. Barlow, Maid of Athens. 11. S. Barlow, Surpassant. 12. J. Morris, Bagquet.

FLAMED BYBLOMENS.—1. W. Whitaker, 'Atlas. 2. W. Clayton, Lord Denman. 3. D. Potts, Bacchus. 4. S. Stead, Van Amburgh. 5. S. Stead, Gibbons. 6. S. Barlow, Queen Charlotte. 7. S. Barlow, Maid of Orleans. 8. D. Potts, Alexander Magnus. 9. D. Potts, Lord Vernon. 10. W. Lea, Violet Amiable. 11. D. Potts, Beauty. 12. D. Potts, Pyramid.

BYBLOMEN BREEDERS.—1. J. Hart, Seedling, 2. W. Lea, Bridesmrid. 3. W. Whitaker, Seedling. 4. S. Stead, Duchés of Sutherland. 5. S. Stead, Seedling. 6. D. Potts, Queen, Willison. 7. S. Stead, Seedling. 8. W. Lea, Emma.

FEATHERED ROSES.—1. W. Lea, Heroine. 2. W. Lea, Heroine. 3. W. Lea, Lady Crewe. 4. S. Barlow, Count. 5. Jno. Walker, Hero of the Nile. 6. J. Morris, Andromeda. 7. W. Lea, Lady Lilford. 8. S. Stead, Aglaia. 9. J. Hart, Walworth. 10. W. Whitaker, Mrs. Lea. 11. S. Barlow, Bion. 12. J. Slater, Claudianna.

FLAMED ROSES.—1. S. Stead, Aglaia. 2. D. Potts, Lady Catherine Gordon. 3. T. Salt, Aglaia. 4. D. Potts, Unique. D. Potts, Vesta. 6. W. Clayton, Anastatia. 7. W. Lea, La Vandicken. 8. A. Tomlin-

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son, Triumph Royal. 9. S. Barlow, Celestial. 10 D. Potts, Count. 11. D. Potts, Ponceau Brilliant. 12. W. Clayton, Kate Connor.

Rose Breeders.—1. W. Lea, Seedling. 2. S. Stead, Juliet. 3. W. Lea, The Bride. 4. S. Barlow, Lord Derby. 5.S. Stead, Seedling. 6. S. Barlow, Celestial. 7. W. Lea, Ann Hathaway. 8. S. Barlow, Arlette.

WATERLOO TULIP SOCIETY.

The members of this Society, held their annual show at the house of Mr. Thomas Rolley. the flowers exhibited, considering the show was confined to cottage growers, were of a superior class.

The judges were Mr. J. Faulkner, Mr. W. Chadwick, and Mr. John Hilton. The following is a list of prize-holders :—

Maiden Prize—T. Rolley, Charles X.

Feathered Premium—H. Housley, Charles X. (silver cup.)

Flamed Premium—J. Hulme, Lord Denman (set of China).

Feathered Bizzares.—1. H. Houseley, Charles X. 2. T. Rolley, Charles X. 3. R. Leah, Devonshire. 4. H. Houseley, Magnum. 5. H. Houseley, Dutch Cat. 6. T. Rolley, Lord Lilford. 7. J. Turner, Apelles. 8. R. Leah, Crown Prince.

Flamed Bizzares.—1. J. Turner, Sanzoe. 2. J. Hulme, Sanzoe. 3. J. Hulme, Lancaster. 4. J. Hulme, Polyphemus. 5. W. Lambert, 6. H. Houseley, Merit. 7. T. Rolley, Lustre. 8. T. Rolley, Paul Pry.

Feathered Byblomens.—1. J. Bakewell, Edgar. 2. H. Houseley, Delight. 3. J. Bakewell, Bienfait. 4. T. Rolley, Maid of Orleans. 5. J. Clarke, Violet Winner. 6. J. Hulme, Beauty. 7. H. Houseley, Violet Amiable. 8. T. Rolley, Baguet.

Flamed Byblomens.—1. J. Hulme, Lord Denman. 2. R. Hopwood, Lord Denman. 3. R. Hopwood, Bacchus. 4. J. Hulme, Violet Waller. 5. W. Lambert, Van Amburgh. 6. J. Turner, Alexander. 7. T. Bullock, La Belle Narene. 8. H. Houseley, Anastatia.

Feathered Roses.—1. J. Turner. Heroine. 2. J. Turner, Heroine. 3. H. Houseley, Lady Crewe. 4. W. Lambert, Compt. 5. T. Rolley, Anastatia. 6. H. Houseley, Newcastle. 7. H. Houseley, Aglaia. 8. T. Bullock, Unknown.

Flamed Roses.—1. J. Turner, Aglaia. 2. J. Waring, Unknown. 3. J. Bakewell, Unique. 4. W. Lambert, Aglaia. 5. H. Houseley, Vesta. 6. T. Bullock, Triomphe Royale. 7. R. Leah, Lady Crewe. 8. S. Hulme, Wallworth.

Bizzare Breeders.—1. W. Lambert, Sir J. Paxton. 2. J. Hulme, Polyphemus. 3. H. Houseley, Hamilton. 4. H. Houseley, Charbonier.

Byblomen Breeders.—1. J. Turner, Maid of Orleans. 2. H. Houseley, Sutherland. 3. J. Turner, Sancta. 4. H. Houseley, Delicate.

Rose Breeders.—1. J. Hulme, Arlette. 2. J. Hulme, Baterby's Gem. 3. J. Hulme, Village Maid. 4. J. Bakewell, Juliet.

Selfs.—1. J. Turner. 2. R. Leah.

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BEDFORD LEIGH, LANCASHIRE, JUNE 1.

FEATHERED BIZZARES.—1. Richard Prescott, Lord Lilford. 2. Robert Belshaw, Charles X. 3. Richard Hindley, Crown Prince. 4. John Morris, Surpass Cat. 5. Richard Prescott, Duke of Savoy. 6. Richard Prescott, Trafalgar. 7. Thomas Hilton, Magnum Bonum. 8. Richard Ratcliffe, Duke of Devonshire.

FEATHERED BYBLOMENS.—1. Richard Prescott, Mungo. 2. Richard Prescott, Vialet Winner. 3. John Morris, Beinfsit. 4. Thomas Hilton, Washington. 5. John Morris, Queen of the North. 6. Robert Belchaw, Maid of Orleans. 7. Richard Ratcliffe, Sable Monarch. 8. Richard Prescott, Lawrence's Friend.

FEATHERED ROSES.—1. Richard Prescott, Heroine. 2. John Morris, Lady Crew. 3. Richard Hindley, Andromeda. 4. Richard Prescott, Hero of the Nile. 5. Richard Ratcliffe, Count. 6. Richard Ratcliffe, Catharine Gordon. 7. Richard Hindley, Doolittle. 8. Thomas Hilton, Village Maid.

FLAMED BIZAARES.—1. John Morris, Joe Sands. 2. John Tyldesley, Lustre. 3. Richard Prescott, Doncosie. 4. William Belchaw, Polyphemous. 5. John Thompson, Albion. Richard Hindley, Pilot. 7. Richard Hindley, George IV. 8. Richard Ratcliffe, Lord Stanley.

FLAMED BYBLOMENS.—Richard Hindley, Beinfait. 2. John Tyldesley, La Belle Narene. 3. James Clegg, Siam. 4. John Morris, Princess Royal. 5. Richard Ratcliffe, Uncle Tom. 6. John Tyldesley, Queen Charlotte. 7. John Tyldesley, Belisimæ. 8. Richard Hindley, Washington.

FLAMED ROSES.—1. Richard Ratcliffe, Agilaia. 2. John Thompson, Unique. 3. Williom Belchaw, Camillus. 4. Richard Ratcliff, Triumph Royal. 5. Richard Prescott, Walworth. 6. William Belshaw, Gorea. 7. Richard Prescott, Pansy. 8. Richard Prescott, Lady Leicester.

BIZZARE BREEDERS.—1. James Clegg, Pilot. 2. Richard Prescott, Carbonier. 3. Richard Ratcliffe, Earl Radnor. 4. William Belchaw, Polyphemus.

BYBLOMEN BREEDERS.—1. William Belchaw, Glory. 2. Richard Ratcliffe, Sutherland. 3. Richard Prescott, Maid of Orleans. 4. 4, Richard Ratcliffe, Unkown.

ROSE BREEDERS.—1. John Tyldesley, Village Maid. 2. William Belchaw, Anastatia. 3. John Tyldesley, Lady Stanley. 4. Richard Prescott, Arlette.

Judges—Mr. Arthur Blackburn and Mr. Robert Clegg.

BEDFORD LEIGH, LANCASHIRE.—MAY 25.

At Mr. Ralph Mort's, "Spinners' Arms," Chapel Street.

Premier Pans—Best Feathered Flower, Lancashire Hero, Richard Hindley; Best Flamed, John Morris, Sanzoe. 1. Richard Prescott, Charles X. Lineus, Lady Crewe, Vesta, Bien Fait, La Belle Nareene. 2. John Morris, Apelles, Sanzoe, Prince Albert, Buckley's Flora, Heroine La Vandikin. 3. Richard Ratcliffe, Charles X., Devonshire,

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Washington, La Belle Nareene, Compt, Unique. 4. William Belshaw, Charles X., Don Cossack, Bienfait, Compte, Unique. 5. Richard Hindley, Charles X. Lustre, Lancashire Hero, Bien Fait, Andromeda, Unique. 6. Robert Belshaw, Charles X. Surpass, Le Cantique, Washington, La Belle Nareene, Lady Crewe, Lady Lester.

FEATHERED BIZZARES.—1. John Morris, Charles X. 2. Ralph Mort, Apelles. 3. Richard Hindley, Devonshire. 4. John Thompson. Trafalgar. 5. Richard Prescott, Paul Pry. 6. John Morris, Seedling, 7. Richard Prescott, Lord Lilford. 8. Richard Hindley, Crown Prince.

FLAMED BIZZARES.—1. Richard Ratcliffe, Devonshire. 2. Richard Prescott, Lustre. 3. Richard Prescott, Surpass Le Cantique. 4 Richd. Ratcliffe, Stanley. 5. J. Morris, George IV. 6. Richard Ratcliffe, Pilot. 7. Richard Ratcliffe, Pollyphemus. 8. Ralph Mort, Sanzoe.

FEATHERED BYBLOMENS.—1. Richard Hindley, Lancashire Hero, 2. Richard Ratcliffe, Queen of the North. 3. Richard Ratcliffe, Violet Amiable. 4. Richard Hindley, Dixon's Beauty. 5. Richard Ratcliffe, Maid of Orleans. 6. Richard Prescott, Violet Winner, 7. Ralph Mort, Mango. 8. John Morris, Bagguet.

FLAMED BYBLOMENS.—1. Richard Ratcliffe, Atlas. 2. Richard Ratcliffe, La Belle Nareene. 3. Richard Ratcliffe, Princess Royal, 4. Richard Ratcliffe, Denman. 5. Robert Belshaw, Siam. 6. Robert Belshaw, Adelaide. 7. Robert Belshaw, Amiable. 8. Ralph Mort, Charlotte.

FEATHERED ROSES.—1. Robert Belshaw, Lady Crewe. 2. William Belshaw, Heroine. 3. William Belshaw, Andromeda. 4. John Morris, Mistress Lea. 5. Richard Prescott, Aglaia. 6. Richard Compte. 7. Richard Prescott, Village Maid. 8. John Morris, Newcastle.

FLAMED ROSES.—1. Ralph Mort; Unique. 2. John Morris, Aglaia. 3. Richard Hindley, Andromeda. 4. John Morris, Lady Crewe. 5. Robert Belshaw, Village Maid. 6. William Belshaw, Triumph Royal. 7. Richard Hindley, Vesta. 8. Ralph Mort, Ponceau.

Breeder Pans—1. Richard Ratcliffe, Harry Ostes, Sunderland, Queen of England. 2. Ralph Mort, Unknown, Prince Albert, Lady Stanley.

Breeder Class.—William Belshaw, Duke of Kent. 2. John Morris, Old Dutch Cat. 3. John Morris, Seedling. 4. Robert Belshaw, Polyphemus.

Byblomen Breeders.—1. Richard Ratcliffe, Belshaw's Glory. 2. John Thompson, Lady Seymour. William Belshaw, Sunderland. 4. Ralph Mort, Earl of Warwick.

Rose Breeder.—1. Ralph Mort, Anastasia. 2. William Belshaw, Village Maid. 3. Richard Ratcliffe, Lord Derby. 4. Ralph Mort, Lady Stanley.

Selfs.—1. John Thompson, Windsor. 2. Ralph Mort, White Perfection. Best Breeder, Richard Ratcliffe, Sunderland.

Best Feathered Flower—Richard Hindley. Best Flamed Flower, John Morris, Sanzoe.

Judges—Mr. Wm. Lea, Mr. Arthur Blackburn, Mr. John Belshaw.

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ROYTON, JUNE 1ST.

Held at the house of Mr. John Tomlinson, "Spread Eagle" Inn.

Judges—Mr. Robert Taylor, Mr. William Bentley, and Mr. Joseph Rhodes.

Hon. Secretary—Mr. Benjamin Hilton, Royton.

BEST PAN OF TWO RECTIFIED TULIPS.—1. Mr. John Heap, Surpass le Grand and Aglaia. 2. Mr. John Platt, Duke of Devonshire and Unique. 3. Mr. John Wood, Charles X. and Sanzoe. 4. Mr. Samuel Barlow, Magnum Bonum and Sanzoe. 5. Mr. James Heap, Charles X. and Unique. 6. Mr. Thomas Holden, Lady Crewe and Unique. 7. Mr. William Bentley, Bienfait and Pilot. 8. Mr. Samuel Brooke, Lady Crewe and Aglaia.

FEATHERED BIZZARES.—1. Jno. Heap, Magnum Bonum. 2. Thos. Stephenson, Charles X. 3. Jno. Heap, Cat. 4. Samuel Brooke, Rising Sun. 5. Jas. Heap, Duc de Savoy. 6. Samuel Barlow, Vivid. 7. Jas. Heap, Lord Lilford. 8. Henry Frances, Masterpiece.

FLAMED BIZZARES.—1. James Ogden, Sanzoe. 2. Samuel Brooke, Charbonier. 3. H. Frances, Charles X. 4. Jno. Platt, Pilot. 5. H. Frances. Goldham's Rising Sun. 6. Samuel Barlow, Truth. 7. James Ogden, Cat. 8. Jno. Heap, Lustre.

BIZZARE BREEDERS.—1. Samuel Barlow, Emperor Nicolas. 2. H. Frances, Sir Joseph Paxton. 3. Samuel Barlow, Sultan. 4. Samuel Barlow, Captain Nolan.

FEATHERED BYBLOMENS.—1. Jas. Heap, Buckley's Beauty. 2. Jas. Heap, Bienfait. 3. Samuel Barlow, Surpasant. 4. William Bentley, Brittannia. 5. Jno. Heap, Violet Amiable. 6. Samuel Brooke, Bri de Siam. 7. Samuel Barlow, Mnid of Orleans. 8. J. H. Wood, Lancashire Hero.

FLAMED BYBLOMENS.—1. Jas. Heap, Bienfait. 2. Thomas Holden, Lord Denman. 3. Jno. Heap, Catharina. 4. James Ogden, Beauty. 5. Jas. Heap, Bacchus. 6. Samuel Barlow, Beauty of the Plain. 7. James Ogden, Violet Amiable. 8. W. Bentley, Queen Charlotte.

BYBLOMEN BREEDERS.—1. Samuel Barlow, Delicata. 2. Samuel Barlow, Van Amburgh. 3. James Ogden, Adonis. 4. Jas. Heap, Seedling.

FEATHERED ROSES.—1. Samuel Barlow, Count. 2. Samuel Brooke, Crew. 3. William Bentley, Bion. 4. Jas. Heap, Newcastle. 5. Jno. H. Wood, Heroine. 6. Jno. H. Wood, Andromeda. 7. Benjamin Hilton, Fairplay. 8. J. H. Wood, Monument,

FLAMED ROSES.—1. Samuel Barlow, Aglaia. 2. Samuel Barlow, Vesta. 3. Jno. Platt, Unique. 4. Samuel Barlow, Lavandicken. 5. William Butterworth, Celestial. 6. Jno. Heap, Rose Guarrier. 7. Jas. Heap, Triomphe Royale. 8. Samuel Brooke, Anastatia.

ROSE BREEDERS.—1. Samuel Barlow, Lord Derby. 2. Thomas Holden, Juliet. 3. Samuel Barlow, Celestial. 4. William Bentley, Anastatia.

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VILLAGE TAVERN, COBRIGE JUNE 1st, 1861.

1. Mr. Thomas Boote, Magnum Bonum and Sir J. Paxton. 2. Mr. George Wood, Lady Jane Grey and Aglaia. 3. Mr. William Kelsall, Purple Perfection and Venus.

FEATHERED BIZZARES.—1. T. Boote, Magnum Bonum. 2. T. Boote, Charles X. 3. T. Boote, Cobden. 4. T. Boote, Surpass Catafalque. 5. W. Kelsall, Magnum Bonum. 6. T. Boote, Duke of Devonshire.

FLAMED BIZZARES.—1. T. Boote, Sanzoe. 2. T. Boote, Pilot. 3. T. Boote, Sanzoe. 4. T. Boote, Charbonier. 5. W. Kelsall, Surpass Catafalque. 6. T. Boote, Duke of Kent.

FEATHERED BYBLOMENS.—1. T. Boote, Vilot Amiable. 2. G. Wood, Bijou de Amateurs. 3. T. Boote, Vilot Amiable. 4. W. Kelsall, Purple Perfection. 5. G. Wood, Unknown. 6. T. Boote, Boquette.

FLAMED BYBLOMENS.—1. T. Boote, Purple Perfection. 2. T. Boote, Alexander Magnus. 3. G. Wood, Purple Perfection. 4. W. Kelsall, Abbot's Gem. 5. T. Boote, Charlotte. 6. W. Kelsall, Venus.

FEATHERED ROSES.—1. T. Boote, Heroine. 2. T. Boote, Comte de Virginnes. 3. T. Boote, Aglia. 4. W. Kelsall, Anastatia. 5. G. Wood, Lady Jane Grey. 6. T. Boote, Mrs. Mana.

FLAMED ROSES.—1. T. Boote, Aglia. 2. T. Boote, Aglia. 3. T. Boote, Lady Jane Grey. 4. T. Boote, Triomphe Royale. 5. T. Boote, Village Maid. 6. T. Boote, Queen Phillipa.

BIZZARE BREEDERS.—1. T. Boote, Sir Joseph Paxton. 2. W. Kelsall, Duke of Kent. 3. G. Wood, Unknown.

BYBLOMEN BREEDERS.—1. W. Kelsall, Lady Jane Grey. 2. T. Boote, Purple Perfection. 3. W. Kelsall, Purity.

ROSE BREEDERS.—1. T. Boote, Miss Boote. 2. G. Wood, Gibbons's Catherine. 3. T. Boote, Unknown.

CHELL, JUNE 8th, 1861.

Held at the "Hope and Anchor Inn."

1st Prize Mr. Thos. Boote, Magnum Bonum, and Sir Joseph Paxton.
2nd Prize, Mr. George Wood, Charles X, and Milo.
3rd Prize, Mr. William Kelsall, Lord Lilford, Ditto Flamed.

FEATHERED BIZZARES.—1. G. Wood, Charles X. 2. T. Boote, Surpass Catafalque. 3. T. Boote, Magnum Bonum. 4. T. Boote, Charles X. 5. G. Wood, Lord Lilford. 6. T. Boote, Nilor, No. 34.

FLAMED BIZZARES.—1. Charles X. 2. T. Boote, Pilot. 3. T. Boote. Charles 10. 4. G. Wood, Catafalque, superior. 5. G. Wood, Charbonieur. 6. G. Wood, Sydney Smith.

FEATHERED BYBLOMENS.—1. T. Boote, Bagguet. 2. T. Boote, Violet Amiable. 3. G. Wood, Bijou de Amateurs. 4. T. Boote, Lady Denman. 5. T. Boote, Maid of Orleans. 6. T. Boote, Purple Perfection,

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FLAMED BYBLOMENS.—1. T. Boote, Alexander Magnus. 2. T. Boote, Princess Royal. 3. G. Wood, Lucy Neal. 4. T. Boote, Princess Royal. 5. T. Boote, Queen Charlotte. 6. G. Wood, Great Western.

FEATHERED ROSES.—1. T. Boote, Heroine. 2. T. Boote, Heroine. 3. G. Wood, Triumph Royal. 4. T. Boote, Andromeda. 5. G. Wood, Duchess of Sutherland. 6. G. Wood, Comte de Virginnes.

FLAMED ROSES.—1. T. Boote, Aglaia. 2. G. Wood, Duchess of Sutherland. 3. G. Wood, Triumph Royal. 4. G. Wood, Aglaia. 5. G. Wood, Rose Will. 6. T. Boote, Village Maid.

BIZZARE BREEDERS.—1. T. Boote, Sir Joseph Paxton. 2. T. Boote, Unique. 3. G. Wood, Duke of Devonshire.

BYBLOMEN BREEDERS.—1. T. Boote, Purple Perfection. 2. G. Wood, Maid of Orleans. 3. T. Boote, Purity.

ROSE BREEDERS.—1. T. Boote, Miss Boote. 2. G. Wood, Uunknown. 3. G. Wood, Gibbon's Catherine.

SELF'S.—1. G. Wood, Min d'Ore. 2. W. Kelsall, White Perfection.

DRESDEN, NEAR LONGTON.

Held at Mr. T. Bridgwood's, "Sutherland Arms."

BEST PAN OF TWO TULIPS.—1. T. Forrister, Charles X. and Denman. 2. J. Dennis, Charles X. and Polyphemus. 3. G. Wilson, Charles X. and Merit. 4. E. Oxley, Magnum and Polyphemus. 5. J. Hughes, Aglaia and L. C. Gordon. 6. S. Bridgwood, Maid and Denman.

FEATHERED BIZZARES.—1. E. Hoxley, Magnum. 2. T. Forrester, Rufus. 3. G. Wilson, Competitor. 4. G. Wilson, Lilford. 5. G. Wilson, Charles X. 6. J. Hughes, Dentonia. 7. S. Bridgwood, Unknown. 8. S. Bridawood, Villaflora.

FLAMED BIZZARES.—1. G. Wilson, Catafalque. 2. G. Wilson, Lord Lilford. 3. G. Wilson, Polyphemus. 4. J. Dennis, Rufus. 5. J. Hughes, Nelson. 6. T. Forrister, Bedford. 7. J. Dennis, Unknown. 8. J. Dennis, Hampden.

FEATHERED BYBLOMENS.—1. T. Forrister, Maid. 2. T. Forrister, Maid. 3. J. Dennis, Midland Beauty. 4. G. Wilson, Lawrence Friend. 5. T. Forrister, La Belle. 6. J. Bridgwood, Chelleston. 7. J. Hughes, Compte de Flanders. 8. G. Wilson, Chelleston Beauty.

FLAMED BYBLOMENS.—1. G. Wilson, Van Amburg. 2. G. Wilson, Denman. 3. G. Wilson, Albert. 4. T. Forrister, Venus. 5. T. Forrister, P. Royal. 6. J. Hughes, Charlotte. 7. S. Bridgwood, Mid Beauty. 8. E. Oxley, Violet Amiable.

FEATHERED ROSES.—1. T. Forrister, Hero of the Nile. 2. J. Dennis, Lady Crewe. 3. T. Forrister, Hero of the Nile. 4. J. Hughes, Andromeda. 5. S. Bridgwood, Heroine. 6. S. Bridgwood, Bion. 7. G. Wilson, Compte. 8. S. Bridgwood, Lady Stanley.

FLAMED ROSES.—1. T. Forrister, Aglaia. 2. J. Dennis, Aglaia. 3. J. Dennis, Princess Royal. 4. T. Forrister, Lady Jane Grey.

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5. E. Oxley, Anastatia. 6. G. Wilson, Catharine. 7. T. Forrister, Mrs. Auld. 8. T. Forrister, Unknown.

BREEDERS.—1. E. Oxley. Polyphemus. 2. G. Wilson, Maid. 3. Wilson, Anastatia.

BEAUTIES YET UNBORN.

The *Chronicle* has presented its readers with three engravings of ragged Chrysanthemums. Two of them are called "Star Chrysanthemums," with petals as narrow as grass; and, if green, would be no bad "representation" of the weeds which will come in neglected gravel walks. A third is called "Dragon Chrysanthemums," in allusion to their *ugly yawning jaws*. From all that the engravings show us, we should think the mop like confused varieties which were first imported, and long since thrown away, would have made much better pictures; and, that if we encourage these weedy and confused sorts, we shall be going back instead of forward with this useful flower. The novel way in which the editor introduces them is highly amusing; he says, after describing the character of those we now cultivate, "Mr. Vietch has sent home two other very distinct forms, *evidently the representatives of many a beautiful production yet unborn.*" How the pretended portraits of flowers already matured, can be "representatives of many a beautiful production yet unborn" we cannot divine. We must get some talented Irishman to interpret the article, and then publish the translation for the benefit of our readers. If we by chance found them among a batch of seedlings, we should most assuredly throw them away; but Botanists' find beauty in things that the Florist would treat as weeds, to say nothing of "*beautiful productions yet unborn.*"

WHAT MAY NOT BE DONE WITH FLOWERS?

IT would hardly be believed, were it not authenticated in our own days, that the magnificent pansies of the present time were brought by culture from the weed called "Love in Idleness," nor can the uninformed imagine that our large and richly flavoured apples were the descendants of the common wild crab; that the gaudy dahlias have within a very short time been produced from the single star-like flower which is now thrown away; and the splendid and odoriferous carnations and picotees which now grace every flower show in their season of bloom, are the offspring of the single windmill-like flower which is banished by every person of taste. It is involved in some doubt, perhaps, what rose was the origin of the present gorgeous varieties, but the wonderful sports of nature, as evinced in a bed of seedlings would induce us to believe it had no better parent than the dog roses in our hedges, or some other such insignificant species. To inquire

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into the means adopted to produce a noble flower from an ignoble origin is our present object, and by taxing our experience in one instance, we may by inference satisfy ourselves with regard to others. Let us take any flower that has not made much advance, but which appears capable of improvement, and set about altering its nature. Let it be something very small, and let us determine upon merely increasing its size. We begin by sowing the best seed we can get, say of a convolvulus, which is familiar to all. From all the seedlings that come into flower select the plants with the largest bloom, pull up and throw away all the rest; save the seed from this large variety only, and sow it again. You will not fail to find that while hundreds of the seedlings are worse than the present, some will be as good, and, it may be, some one or more better. Repeat this perseveringly from year to year, throwing away the worst, and saving each time from the best. A few years will assuredly alter the race to a much larger one, and this may be continued until we are satisfied. Now, whether the object be size, or colour, or form, the progress is the same: select that which is the nearest approach to your wants, and destroy all the others, so that they may not by inoculation spoil the seed of the best.

DAHLIA GROWERS IN THE EAST.

A LARGE trade is now carried on at the east end of London, where many thousands of plants are raised and sent out at remarkably low prices, and in very fine condition. Even the half-guinea plants of the same season may be procured at half price by the middle of June or a little after; and a vast majority of the new ones are dear even at that. The Shows of Dahlias in the eastern suburbs are well supported. The plan of the Societies is unlike that of most others. The members pay monthly sums to a fund, and there are some fines which swell the amount at the expense of the careless contributors. The prizes are as numerous as the members; and there is very little difference between the head one and the next to it: say, twenty-one members pay six shillings each, and the whole fund is divided into twenty-one prizes, they are all bound to put up the best flowers they can. The first prize would be eleven shillings. and the others all sixpence less, down to the last, which would be only eighteen-pence. First, it secures twenty-one stands of flowers at the show; and secondly, the great anxiety is for the merit, and not the money. But this payment is only suppositious. Perhaps they pay twelve shillings; that is, a shilling per month; five shillings of this is reserved for the annual dinner, and the rest divided in the way we say, to make the fall in the amount of the prizes very trifling. In the *Horticultural Journal*, there is an article well adapted to quote as an addition to the foregoing. "Our 'Eastern Question' extends no further than Mile-end and Bethnal-green, where there are several propagators who sell thousands where great men only send send away hundreds, and evince industry and perseverance to a remarkable extent. When we say there are thousands of dahlias

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ready always to send out at the proper season, we under-rate the thing; probably among a very few men a hundred thousand are got ready for the spring sales, and before spring is over they are all gone. The sale of established varieties has been almost transferred to the east. One of the growers propagates and sells more than any two of the great dahlia dealers, and all the secret of this sudden transfer of business is to be found in the reduced prices. We have seen catalogues of dahlias at three shillings per dozen, and instead of weakly, ill-grown plants for the money, they are first-rate in every point, healthy, strong and in excellent order for planting, as well as all alike, for there is a uniformity and a healthiness not to be found in many of the plants of the regular cultivators. The plants seem all cast in the same mould; and when we consider that they are sent out mostly at half the price charged by the respectable houses, we need not wonder at the decline in the sales among the 'great guns.'" Whatever may be said to the contrary, we cannot but admit that the social societies established for one flower only, are the streams which supply the great river of floriculture, and keep alive the spirit of emulation, without which the science would be a blank.

THE SALVIA.

This is a most extensive and showy genus, and if there be anything in popular descriptions of colour, the three primitive colours are among them. For instance, salvia coccinea is a splendid scarlet; and salvia patens is a magnificent blue; and we have a choice of several for yellows. Among those recorded are argentea, (or patula, pyramidalis,) aurita, ceratophylla, ceratophylloides, glutinosa, and nubicola. How far these will fill up the yellow we hardly know, but if they be yellow, then no family can produce the three primitive colours so beautifully. Of this genus there are no less than from a hundred to a hundred and ten species mentioned by Paxton. They comprise hardy, frame, green-house, and stove species; and are variously introduced from Austria, Mexico, the Cape of Good Hope, Columbia, Crete, North America, Spain, Barbary, Russia, Turkey, South America, Greece, the Canaries, Armenia, Caucasus, Persia, Egypt, Syria, Peru, and many other places. Many species have had their names changed, and the list of synonymes in the Botanical Dictionary, comprises no less than twenty-five whose names have been changed, and others substituted. Many of the species are not worth notice, but the salvia patens and the old salvia coccinea are the most brilliant of our border flowers; we cannot at any rate spare these. Salvia gesriflora is the best for the houses or conservatory, flowering as it does in the dead of winter. These should be bedded out all the summer, and potted up to flower in houses all the winter. They are raised from seed, or by cuttings, or parting the roots. They require protection against hard winter frosts. They are called green-house and frame plants, but they have been grown some years out

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gardens well drained and covered from the winter cold, and form pretty objects all through their blooming time. The best mode of treating these useful and beautiful plants, is to pot them up out of the ground as soon as they are out of bloom; and if they are carefully taken up they suffer nothing; but they should be cut down and kept dry all the winter, in frames, like verbenas. Early in the spring they may be struck freely from the young shoots, and multiplied to any extent. They are tall enough for the middle rows of border flowers; require tying to stakes as they grow; and when they have attained the height of two feet or more, they begin to flower, and continue until the cold weather checks them. They are not adapted much for pot plants, though in conservatories we are glad of anything to help make a show in the autumn; instead, therefore, of turning all out, pot some into pots, size twenty-four; give them plenty of air and water; let the soil be loam and peat, and rotten dung; and when they begin to rise for flower, place a neat stick in the pot to support them. The blue and scarlet are of great service among many dingy autumn flowers.

H. M.

SOCIETIES IN DUNFERMLINE.

A LETTER in the present number gives us a favourable picture of floriculture in the above locality, and we have before us no less than four schedules for 1861.

The ANCIENT SOCIETY OF GARDENERS shows the last Tuesdays in April, May and July, and it is supposed to be the oldest in Scotland; they celebrated their centenary festival in September, 1816, and as our informant tells us "a wee room would hold the survivors." It is a friendly or benefit society, with a revenue from land of £140 per annum. They give £5 in premiums, and twelve or fifteen generally compete.

DUNFERMLINE SOUTHERN DISTRICT Horticultural Society hold their shows the first Saturday in June, and the second Saturday in July and September, last show 394 blooms of Tulips were entered. There are about Sixty members.—Established 1847.

DUNFERMLINE NORTHERN DISTRICT Horticultural Society, established 1850, hold shows 20th July and 21st September, and the number of extra prizes is very great, no less than 56 for July and 63 for September, and most of them give a second prize, which nearly double the number.

DUNFERMLINE HORTICULTURAL SOCIETY, established in 1832, hold shows 16th July and 17th September, they appear to give about thirty prizes to practical gardeners, twenty to cottagers, and ten to amateurs in July, and the same in September, except that the amateurs are increased to sixteen, and more than thirty extra first prizes are given at each show. We heartily wish them all great success.

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ON THE EXHIBITION OF ROSES.

THE first time we recollect to have seen roses exhibited like dahlias, was at a meeting of the old Metropolitan Society, and it was the same year that the striped rose, called the Village Maid, was imported by Calvert. It struck us then that if that were made the fashionable mode of exhibiting them at the July shows, it would lead to great improvements. At a Floral Meeting in Buckinghamshire, the roses were so exhibited, and presented a very pretty object among the numerous and varied productions. But there was at that meeting a gentleman who declared that he had purchased more than five hundred kinds, first and last, and that he could not among the whole number find twenty-four fit to be shown for the individual properties of the single flower. Such, indeed, was the character of a great number, that he should have all but about forty changed by budding the better ones on these, as he would multiply the number of each of the best rather than keep things that he considered discreditable to the gardens. We are glad the plan of showing single blooms has been resumed in many parts of the country, and we strongly recommend all societies to follow the example, as a piece of the greatest service that can be rendered the floral world at the present moment. The mode of exhibiting them in bunches has greatly encouraged the spurious and worthless varieties. A bundle of flowers shown together may look gay according to their colours, but they are so squeezed together, that if they were of good form, the form would be spoiled, and the bad form makes as good a bunch to look at as the better ones; but let any one look round the scores of bunches that may be seen at the great exhibitions, and see how few there are that have a round form, a plump face, a thick petal, or any other of the good properties which we are taught belongs to a rose. The effect, however, of showing single blooms will be magic, and a good florist will be disgusted with three-fourths of the roses now in cultivation, and those who order them for the future should distinctly require a guarantee that they will bear showing as single blooms. No others, in fact, should be grown but such as have some very distinct good property. A flimsy petalled rose is not worth the room it occupies. It is only fit to make a garden in a litter, and keep the borders and beds untidy. In some of the catalogues we have observed an attempt to describe the roses; and we are not a little astonshed at the effrontery with which we are told that such and such a rose is a show flower. A friend of ours had last year ordered a collection by marking a catalogue, and he put his mark to every variety so designated. It happened that, after he had given his order, we saw his list, and while we admired his spirit, we deplored his folly. The roses came, and of course three-fourths of them, although described as show varieties, were downright worthless; and without attributing any improper motive to the dealers in roses, we must protest against any such indefinite description as "Show Roses" until they learn what a show rose really is. If one-half, and more than one-half, of the roses so called were discarded altogether,

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the list of show varieties would be improved; but even then there would be many that deserve no such character. Let every exhibition have a class of single blooms, not single stems merely, but actually single flowers, and we should soon see the kinds that ought to be appreciated. Some very indifferent flowers might be cultivated for their colour, and some for the habit of the plant in the season of blooming; but nine-tenths of all that were named or sold could be well spared, and rose growing would become a pleasing occupation. We therefore, strongly recommend everybody to promote the showing of roses like dahlias, and abstain from buying any or growing any but such as will stand the test of their merits. There will soon be such an alteration in the collections of roses as will raise them in the estimation of the public, and place the queen of flowers on a respectable footing. We make exception in favor of those always in bloom and to noisettes and climbers, for they are wanted for garden ornaments, and the length and quantity of bloom are the most important qualifications, but even these ought to be double and have thick petals.

HOPES FOR FLORICULTURE.

I HAVE neither right nor inclination to speculate on how things are managed in your quarter, but there are two circumstances in which I think that we have rather the better of you. First, we have no shows at Inns and Public Houses, we get School-rooms frank and free, the school furniture is very convenient, and a good share is left for visitors, and although often too crowded, the amateur seldom needs to go away unsatisfied.

And again, we have little or nothing of the unseemly bickerings and bitter altercations, so much spoken of in the "Midland." I do not say that every decision of the judges is in accordance with the strictest rules of criticism, nor do I say that no disappointed competitor ever speaks unguardedly, but outbursts are rare and soon over. I do not know what amount of beauty in flowers would make up for bad humour, or coarse epithets. Here, it is a common thing for from twelve to twenty of the competitors, along with the judges, to have a social glass, and happy conversation; every one appearing to be pleased with the decisions. I may state that the District Societies are composed entirely of the working classes, mostly weavers. Yours,

Dunfermline, 12th June, 1861. W. M.

[We are happy to receive information of this kind, it is far more pleasant than complaint, but it is not the only locality in which the humble industrious classes set an example which their superiors would do well to copy.]

A LONDON GARDEN.

OUR first essays were like those of most London gardeners—we bought roots at Covent Garden Market, and seeds at any of the shops we happened to find. The plants mostly drooped and died, but the seeds, however diminutive the plants they produced, did their office in

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a small way, and opened their eyes to the different fate of market plants, and plants produced from seed in the ground itself; for although we transplanted seedlings with impunity, we could not make the plants we bought last any time, and if they were once flagging they rarely recovered themselves. We, however, under the advice of friends in the country, afterwards bought our plants at a nursery instead of market, and for years continued to improve the appearance of our little garden. Imitating our friends, the market gardeners, we left some portion up in ridges in winter. As all young gardeners will do, we knocked and stirred about the soil in the most extraordinary way; and by the time we had got through the second year, we found, that although everything grew stunted as compared with the growth in the country, there was hardly an annual that would not bloom somehow. Things under glass did infinitely better, and enough was done to give all the features of a garden, however farcical a comparison of the productions with anything grown at the edge of a town or near it would have been. Seven years perseverance increased rather than damped our ardour for London gardening; there was no difficulty in growing things after the third year, for then it was for the first time, we heard anything about the necessity of draining, and this being an operation beyond our knowledge, was undertaken for us; all we knew was, that the ground was too wet, especially in winter time, and that afterwards it was infinitely better for everything. One of the grand operations in a London garden is a liberal use of the syringe, for the blacks which fall and cover the leaves do infinite damage; but unless the ground be drained thoroughly it is next to impossible to put in good order. It need hardly be told that it is greatly to the advantage of anything to buy it half-grown, and that stocks, china-asters, and migionette, bought by the hundred at the suburban nurseries, at the proper time for planting out, grow much better than those actually raised on the spot. The first object, therefore, in a London garden, is to drain it well, we speak now of the mere bits of ground behind the houses. The next is to see that the soil be something moderately good, or to make it so; it may then be laid out in beds and gravel walks. Seeds of annuals may be sown where they are to bloom, such as convolvulus, larkspurs, sweet-peas, nemophola, &c., &c., and as a general preference, all rapidly-growing and short-lived things do the best. Then if you have any friends out of town to get up others for you, such as stocks, mignionette, china-asters, &c., usually raised in hot-beds, so that you may plant them out in May and June, it will greatly help you. Then with regard to spring-flowers, which should be provided for in Autumn, you should get crocuses and early tulips, hyacinths, narcissus and other bulbs, and plant them in November. Our squares, considering the opportunity, and generally speaking, the expense, are very much neglected; the trees and shrubs ought to be periodically washed with an engine, and one and all should be well drained. A constant succession of flowers could be kept up without much cost, and there is no excuse for the present smoky and desolate appearance. There is too much fondness for deciduous plants, which makes a garden look wretched

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all winter, and too little care taken of the evergreens when they are procured. It is discreditable that you cannot touch a shrub without blacking the hand. We recommend the gardeners who now have the care, to, at all events, keep the plants by syringing. It should be remembered that the rain only washes the upper surface, whereas the garden-engine well applied, with a rose on the branch, to scatter the water small, would force off the dirt from the under sides and the stems. Again, the rain, to which alone the task of cleaning is now left, is often too gentle to remove the dirt, and comes at intervals too far apart, so that, in fact, the gardeners' business should be to wash them effectually and often.

But in any attempt to make or improve a London garden, evergreens should predominate, and it will soon be seen which succeeds the best, for such ought to be encouraged. In condemning the people who are constantly crying out that "nothing will grow in their gardens," we are just fancying how much they do towards making them. They buy roots at a market with hard lumps of clay round them, which dry like a brick. They stick these in a hole, as nearly upright as they can, and drown them with water; the poor drooping things perhaps never hold up their heads any more, or if they do, it is to open two or three flower buds while they are wet, and to die in the attempt. If you must buy plants at market, go early; do not look out those whose roots have been compressed (for they are useless), and plant them out the instant you can get them home. There are some who send roots merely lifted out of the ground into a basket, and in that state sold, there are hopes of these, if they are not too forward, but they are never of any use if they are in bloom; sometimes they will live if they show buds, but they are better if they do not; and pansies, wallflowers, and twenty other things that are brought in full bloom, are only flowers of a day, as it were, and get worse every hour from the moment they are purchased.

THE MANAGEMENT OF A LIMITED GARDEN BY POT CULTURE.

The advantage of this is, that there is little or no disturbance either to plants or garden, and that it increases the range of subjects in a most extraordinary manner. It enables us to be more choice of our subjects, to be more neat and exact in our arrangements, to keep up a better supply of subjects in bloom, and, in short, to do that with regard to appearance that nothing else will. Our first object is to procure a supply of garden frames; a considerable quantity of pots of the sizes 60, 48, 32 and 24; and to select, in addition to the flowers we have already mentioned, verbenas, dwarf scarlet geraniums, cineraries, hydrangeas, fuchsias.

These are for bedding out at a proper time, and as soon as they are in flower. All the subjects intended for transplantation to the principal show garden must be grown in these pots, mignionette, ten-week stocks, nemophila insignis, phlox drummondii, and even china aster, may be sown in autumn and preserved through the winter.

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A FEW MORE FACTS FOR GARDENERS.

THE paper from "A Working Gardener" at Nottingham, was a collection of facts which there is no gainsaying, and I am not sure whether I ought to cavil at it for omitting some others that might have lengthened the chain; I thank him for bringing forward the sentiments of Mr. Carton, who said "depend upon it that whoever deserts the 'Gazette' deserts the best friend we ever had, and when they turn from the 'Gazette' to the 'Journal,' they 'lose the substance to grasp at the shadow.'" The words were prophetic: the whole scheme was bad—got up, as the writer truly said, by "a few of those lazy fellows who fancied they could write, and liked anything better than work." Nobody could doubt their character, and as the "Working Gardener" says, they "concocted a scheme to plunder all the gardeners who had money, by starting a paper on their behalf, and deceiving all those who could afford to buy a 'Journal,' by promising their readers annuities in old age, relief in sickness, and assistance to widows and orphans, and thus took from the 'Gazette' perhaps a thousand readers who were silly enough to believe in the promises of the crafty leaders." The cruelty of this fraud is the greater because it caught all those who were prudently inclined, and weak enough to fancy the promises would be fulfilled; the cruelty to myself, who depended on the produce of the "Gazette," was simply individual cruelty, and therefore sat very lightly upon the consciences of the prime movers in the conspiracy; but I should sadly blink the question if I did not admit that, setting aside the positive loss, it hurt me to meet such a return for my devotion to the gardeners' interests. I was not surprised at the dishonesty of the schemers—I should not have been astonished at any dishonourable act committed by the leaders in that affair—but I was hurt that so large a number of readers deserted a tried friend for the empty promises of a clique, who never intended to carry out the conditions they published. I admit there were some respectable men dragged into the committee, by assurances as false as the original promises; and that others followed the example only to find themselves involved in a hopeless, heartless struggle, from which they knew not how to extricate themselves; but there were others concerned in that mad and foolish, as well as dishonourable undertaking, for whom no act of treachery and dishonesty was too bad to attempt. Nobody, then, need wonder that the silly gardeners who invested their money, lost every shilling, and the readers who looked for the promised benefits, and changed their "Gazette" for the jugglers' "Journal," with a view to better themselves, found nothing but broken promises. Those who lent their names to that mendacious scheme, in spite of my advice and remonstrance, have been spiteful ever since. They *cannot* forget, and *will not* forgive, my sweeping condemnation of men, measures, and motives. But surely, seeing that even in the midst of such ungrateful oppositon I made no change in my advocacy of their interests, for which the writers in their own paper were totally incompetent; those who do not return to the *substance*, now that even the *shadow* has gone, do not study their own interests; for the wider my "dogmas," as they are sometimes called, are spread over the horticultural

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world, the better. If the gardeners were that degenerate, drunken race that the "Chronicle" said they were, when it denounced them as "walking machines for the decomposition of alcohol," why then I was mistaken in my opinion, and need not marvel at any amount of ingratitude; but if they were a neglected, under-paid, ill-appreciated class, whose condition was made worse by the Horticultural Society of London, that set their wages at twelve shillings per week "and find themsleves," which is less by all they eat and drink than a charwoman or a washerwoman had, and one-third less than a bricklayer's labourer, the "Gardeners' Gazette" was right, and did something towards setting them right with the public, caused the raising of their wages in Government establishments, and in many private ones, and ought to be the first paper they patronize, whatever other they might chance to read. However, "we cannot make a silk purse out of a sow's ear." I did not preach sobriety, because it would have been pleading guilty to Dr. Lindley's charge of drunkenness, which I looked upon as a gratuitous insult. If there were any who deserved that character, *they* are the persons to whom I should never look for patronage. The great body of gardeners for whom I laboured *may be* thoughtless, in fact, all who neglect the "Gazette" *are* thoughtless, otherwise they would know that their taking the "Gazette," which to them is a mere trifle, would be the highest reward I could receive, and the strongest incentive I could have to continue labouring; on the other hand, I could make twice as much by directing my attention to other matters, and leaving them to their fate. Gardeners ought to know that men who, confident in their means, care nothing for law, and hold all classes but their own in great contempt, wince under the lash of the public press, and while the "Gazette" lives, and I live to direct it, any act of oppression or injustice, whether committed by high or low, from the Lord Chancellor downwards, will be as sure of exposure as that the fact reaches me, properly authenticated. In this work, the "Midland Florist," such subjects can hardly be entertained, but the "Gardeners' Gazette," which began its bellicose career by exposing the mismanagement, enforcing the reform of Kew, and attacking the Court of Chancery when its powers were invoked to ruin Mr. Thompson, the nurseryman, by an injunction, is calculated for rough business; and its value was not known till the gardeners themselves forced it out of the field for a time. It was "scotched, but not killed," and is now doing its work well once a month, while sundry newspapers show that I do a good deal once a week.

Fulham. GEORGE GLENNY.

THE FATE OF MANY PLANTS.

THE nurserymen who depend on serving the London market with plants would do but poorly if the buyers were less cruel, or less kind, for kindness and cruelty to plants cause vast destruction, and others are constantly bought to replace the dead. There is, at present, no law against cruelty to plants. Thousands are starved to death—for the suffering victims cannot cry out for assistance—their career is but short from full health to dissolution. They are bought and sent home all bloom and beauty; they are put at the

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window, or in a balcony, to "have all the sunshine;" in three days they are baked, the owner recollects that she "forgot to water them:" they look ugly when they are "very dead," and forthwith some more are bought. To make up for the cruelty to the last, they are no sooner got home than they are drenched, and that they may not, poor things, fall victims to the want of water, saucers or pans are obtained to stand the pots in, and are kept constantly filled; the plants are not in such a hurry to die this time. A man may get tipsy for years before it kills him; the headache, the gout, rheumatism, debility, and dropsy, may all take their turns at him before he is finished, but keep him without nourishment, and he will not last as many days as he who has too much lasts years; so with plants—too much liquor is bad for their health, but stagnant water in pans is worse than anything; so that, while the good lady keeps constantly filling the pan, the plant weakens, and she cannot think how it is her pets "don't do well somehow." If they could cry out, they would say their toes were cold and uncomfortable, and by degrees they would complain they had lost the use of them, then that they had the dropsy; and in the last stage of their illness, if their generous mistress would take the trouble to turn them out from the pot, the roots would be found rotten. To be serious; though London is not the place to keep plants in health, they may be preserved much longer than most people keep them, by simple attention to the one duty of watering them at proper times, and proper times only. A plant should never be wet long together, and on this account it is that there is preserved in flower-pots the means to allow the water run off. If you place these flower-pots in water, of course the object is defeated, and all the delicate fibres are constantly soaking. But in rooms you are obliged to have pans to prevent the water that is given to the plants from damaging whatever they stand on. In this case, let the watering be done once a day in hot weather; once in two days, or even three days, in cool or cold weather: nay, sometimes once a week is enough, but throw the water out of the pan as soon as it runs through the pot; and as it will continue to drain through, it must be thrown clean away two or three times if necessary—in other words, there must be none suffered to remain in the pan at any time. A few short rules may be attended to with advantage:—First, When you water, give plenty; generally, plants are potted with about as much room above the soil as will hold all the water they require, and you may always fill up to the brim of the flower-pot. Second, Never give any water while the mould in the pot is moist, for plants constantly drenched cannot do well. Third, Give air in fine weather, and if a genial shower of rain fall, and you have the convenience to do it, put the plants out to reap the advantage of it. Lastly, If the pots stand in pans, empty out the water, for it is death. These apply as much to the country as to London, and certain are we, that a great improvement in the health of the plants grown in dwelling-houses would result from due attention to these very simple rules, to which, however, we may occasionally add further results of experience.

There is no part of the work in the garden more important just now than weeding; for when nothing else prospers, "ill weeds grow apace." We are no advocates for watering, and those who begin it to plants in the open ground must go on with it, for the watering draws all the fibres to

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if the vitiated taste of the London Horticultural Society must prevail in the metropolis, let us hope there are other bodies appointed to encourage gardening who will rescue their own neighbourhood, at least, from the odium of such childish proceedings.

UPS AND DOWNS.

When a man is in prosperity, everybody wants to serve him; turn the tables a little, and the same people will hardly know him; let Fortune's wheel take half a turn more, which, if he but persevere, it is sure to do, and he is raised again; then all his friends congratulate him, rejoice in his recovery; and unless restrained by the consciousness of their own meanness, they will be as forward as ever to inflict their good offices on him. In the meantime, some of his affluent friends have, in turn, become unfortunate; let him remember the pangs which he has felt when they despised or neglected him, and lose no opportunity of returning good for evil, if it be only by the most trifling acts of kindness; it is sweet revenge, and cheaply had, if he return good for evil. Tom Nokes was sought for his society, and courted for his influence, when Fortune smiled *on his* path; abandoned, shunned, and slandered, when his condition was reversed; but the untiring zeal with which he persevered, prevailed over all obstacles, and he once more gained his position; then it was he overwhelmed his quondam friends with shame and remorse, by appearing to forget, both his fall and their ingratitude. He lived to see the majority tumble in their turn, and even those who were not subjected to the contumely which they had heaped on him. He consoled *much* those whom he could but assist *little*, and demonstrated with what a small sacrifice a fallen man might be comforted. How little did some of those, to whom he had in vain applied for assistance in his trouble, calculate on the chances of human life. He who spurns the application of the less fortunate, too often repents in a cutting retaliation, or smarts more deeply when the object of his neglect unexpectedly has the power to help him, and uses it like a Christian. The man who seems beyond the reach of evil, is too often the first to fall; and what is his humiliation when he finds the man whom he has used ungraciously the first who is able and desirous to help him? Let it be a lesson to the prosperous. Let the wealthy remember that one of the thousand ills which reach the throne itself may place in a very humble instrument the power to lessen or remove it, and profit by the fable of the "Lion and the Mouse." Tom Nokes lived to see half his enemies safely out of this world, and the other half worse off than himself.

MARKET GARDENERS' ENEMIES.

Market Gardeners have, among other evils, a just complaint, that gentlemen, aye, noblemen, send their produce to market, and with their commodities, which they can afford to sell at less than men who get their

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living by it, depreciate all their prices. It is, indeed, too bad, that persons, wealthy beyond their wants, send their fruit and vegetables to market to compete with tradesmen depending on their business for their entire income; and this is an evil growing daily by the mere force of example. It is a question for consideration, whether the names of those wealthy market gardeners ought not to be regularly published, that the world may know the difference between the nobility and gentry who descend to this huxtering method of increasing their income, and those who have souls above such paltry transactions. Truly, there is something worthy of a dukedom in the act of setting up against market gardeners, to their manifest injury. To us it seems a despicable idea, that wealthy competitors should be scrambling to sell their surplus commodities, instead of distributing them among their poor neighbours, who have no means of buying. Gardeners are all interested in anything that raises or lowers the price of garden produce, whether they work for market or for private persons. The higher the produce in the market, the more value the produce at home; the more useful the private gentleman's garden, and the less he begrudges the expense. Everything that affects the interest of the gardener, begins at market price; whatever tends to keep that up, benefits all; but he who, not wanting the money, but possessing ample wealth, condescends to increase his store by the sale of garden produce, ought to change places with one of the honest, hard-working, market gardeners; he ought to turn out at all hours, and to follow the drudgery of his vocation, until he is convinced of the mischief done by wealthy rivals. We shall return to this part of the subject, for the nobleman who sells cabbages and onions ought to be known as a dealer. He has no right to be received as a gentleman when he gets part of his income by costermongering; and no man who gets his bread by gardening, can compete with a rival to whom price is no object, and whose very act of selling appears to be an endeavour to injure an industrious class.

THE APATHY OF POSSESSION.

"WHY should I care about others?" has been suggested to us as the prevailing sentiment among gardeners in good places, but we hope it is not the true state of things. Such a notion would be cruel and impolitic—cruel to all their less fortunate brethren, impolitic as regards themselves. The best man in the best place cannot feel himself secure if he thinks on the subject at all, because a death may throw him on the world, among the host who are seeking places; and this reflection ought to make him act for the common benefit of the profession. He may, with his legs under his employer's table, or with plenty in his own cottage, be careless of the world's frowns—careless of what others suffer—careless as to his moral and social duties to his fellow-man; but, sooner or later, he may be —like scores upon our list—capable of taking a first-class situation, but living upon his former savings, or, perhaps, lucky enough to work at a nursery at twelve shillings per week—the Horticultural Society's price for a gardener—and only drawing on his store for the difference between

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that and the cost of his board, lodging, and washing. And how long may he be thus occupied, thus half-paid, thus looked down upon by the man to whom he has sent all his orders when in place? Why, until the nurseryman can find another place in which the man can serve him in business. If we could consistently publish a list of really good men now *out* of place, it would make some of those who are *in* think a little of the future, and feel for their fellow-men. It would show them the instability of human affairs. What, then, is their duty? To promote everything that will advance the interests of gardeners; to support everything that is likely to increase their wages, encourage their employment, and promote their comforts, whether it be in subscribing to a society, patronizing a publication, or contributing their share of useful knowledge for the benefit of others less experienced. They ought always to bear in mind that however remote the chances of a reverse may be, an unlucky turn of Fortune's wheel may accomplish it in an hour; a birth, a death, a marriage, a bankruptcy, a panic, however unlikely they may be to change the prospects of a gardener, might alter the arrangements of a whole family on whose place he depends. In fact, the change of an owner, or a tenant, may break up an establishment, and the gardener who has calculated on "seeing his employer out" and being taken care of by his will, may find himself at an advanced age thrown out of work, when "he is not everybody's money," and wandering about, like many good men, getting poorer every week he lives. Then it is that he will feel the want of sympathizing friends. Then it is that he will think as ill of his brethren in high places for keeping aloof, as others thought of him when he would do nothing on behalf of the profession in general. Let us ask all sensible men one question, When a patrician employer does a wrong and knows it, what does he fear? Only one thing on earth—public opinion, and this can only be reached by "THE PRESS;" therefore it is the gardeners' first duty to uphold a journal established for their protection, their instruction, their amusement; wherein their complaints may appear, not garbled and cut up to suit the whims and meet the fears of a prejudiced editor, but in their genuine language and original force. Little as this may be valued by the thoughtless who seem to be in want of nothing, twenty-four hours might change him to an injured man, without the means of stating his wrongs or demanding his rights. Let every gardener remember this; then also bear in mind that the individual who undertakes the task has been tried, and never found wanting; that he was superseded for a time in the midst of his successful mission by the "blue aprons" themselves, who vainly attempted in their "journal" to supply his place; that he has nevertheless continued to this day, and is not likely to be changed, an uncompromising advocate of the British Gardener.

PIRATICAL WORKS ON GARDENING.

AMONG recently-published works on gardening there is one of which a great many would say it is one of our very worst books. There are engravings from "the Gardener and Practical Florist," others from "the

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Horticultural Magazine," extracts and paragraphs from "Golden Rules," and from our "Properties of Flowers," quite enough to identify us with the work; mixed up with matter borrowed from other books, and garbled so that they can hardly be recognized. The first impression would be that Glenny was "used up." Our title is also used, all but one letter,—*of* instead of *on*—so that whoever got the spurious work instead of ours, must come to the conclusion that it was ours, that we were using up our old wood-cuts, and turning out, without exception, the worst book that ever disgraced horticultural literature. The lawyers will have to settle this matter, and we know not exactly how, but this piracy business must be stopped. A weekly paper, conducted by adepts at appropriation, has actually appeared with articles signed "George Glenny," set up in large type, as original communications. Other articles of ours from "the Midland Florist," and "the Gardeners' Gazette," conveying to the gardening world that we were concerned, or at least were willing contributors. The only way we can stop this will be by injunction; but we have given notice to the publishers not to sell those numbers in which our articles are printed, and having given notice we shall send round to see whether it is obeyed: if not, we must make the publishers parties in the Bill which we must file, and see how they like Chancery. It is true that if all the books they sell were to be abstracted from the numbers sold of either of our works, we should not feel it, but advertisers are gulled, and they actually pay the expenses of printing the very few that are printed, and leave a profit. The advertisers have not the sense to see that the money is wasted, but it is important that we remove the impression that we have any concern in a periodical perhaps neither known nor seen by any except the advertisers, who, of course, are furnished with copies, and coaxed with an occasional puff, and who, from the dishonest course pursued by the conductors would naturally conclude that we had an interest in a work which exists on, and is made up with, extracts, not more discreditable to the piratical appropriators than to the advertisers by whose folly it is kept up. Works may well be cheap, when nothing is paid for articles which could only be procured honestly at a price that would amount to more than all the money they take.

GEO. GLENNY.

HORTICULTURE IN ST. GILES.

"WHERE there's a will there's a way," says the old proverb, and in most cases it is very true. It may at first create a smile if we inform the reader that there has been a floral and horticultural show in Bloomsbury, and that the exhibitors comprised some of the poorest of the working classes and children of the ragged schools. But it is quite true. The Rev. Emilius Bayley issued a schedule of prizes offered for competition among the various classes, separated in such manner that persons in the most confined situations should compete by themselves, and those residing in more open streets by themselves, and independently of these the various schools divided from the boys and girls of the ragged, so that no class of

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persons should have to show against persons who have any advantages over them. The following is an outline of the schedule:

Bloomsbury Flower Show.

An exhibition of plants belonging to the working classes of the above parish will be held (D.V.) on Wednesday, June 19th, 1861, in the National School Room, Bury Street.

The following prizes are offered for competition:—

1. *Prizes for Adults.*

1. Persons living in the Little Coram Street district, viz., Little Coram Street, Abbey Place, Chapel Place, Russell Place, Coram Place, Marchmont Place, Tavistock Mews, Colonade, Little Guilford Street.

For Fuchsias—First, second, third, and fourth prizes.
For Geraniums— do. do.
For Annuals— do. do.

2. For persons living in the mews, similar prizes.
3. Persons living elsewhere in the parish, similar prizes.

2. *Prizes for Children of Working Classes living in the Parish.*

1. Parochial, National, Sunday, and Infant Schools. Boys.

For Fuchsias—First, second, third, and fourth prizes.
For Geraniums— do. do.
For Annuals— do. do.
Girls similar prizes.

2. Ragged Schools, boys and girls, similar prizes.

3. *Prizes for Domestic Servants.*

For any plants—First, second, third, and fourth prizes.

The following are the rules to be observed:—

1. Exhibitors must bring their names and addresses, with the name and number of the plants they intend to exhibit, to the Parochial Vestry, between the hours of 10 and 12, on any morning of the week after April 22nd; and no person will be allowed to compete who has not given in his name on or before Saturday, March 4th.
2. The plants so registered must remain in the parish, and under the care of the exhibitor, until the time of the exhibition.
3. Different members of a family are eligible to compete for the prizes.
4. The fourth prize in such class will be given to plants not in bloom.
5. The plants are to be brought to the school-room on the day of exhibition, before 10 in the morning.
6. No gardener or flower dealer to be allowed to compete for the prizes.
7. Admission to exhibitors, free; to non-exhibitors, 6d. before 5 P.M.; after that time, 1d.

N.B.—Exhibitors are advised to procure plants which may be expected to be in bloom by the day of the show.

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Walter H. Bosanquet, Esq., 5, Torrington Place, has kindly consented to give further information to intending exhibitors, and is also willing to register plants within the time specified above, every evening after 7.

EMILIUS BAYLEY, Rector.

We, who have for something like thirty years been incessently recommending the institution of shows among the working-classes, and have seen in the Duke of Northumberland's school at Alnwick the beneficial effects of extending it to children, hail this as the foundation of immense good in close towns, especially in London; and we heartily congratulate the minister on the success which has attended his endeavours. The show brought out plants grown in windows in the most miserable portions of St. Giles, and although there was not and could not be the healthy growth of open air in the country, the worthy patron of the movement had provided that the competitions were all upon equal terms. Those in dark narrow streets had only to show against people similarly circumstanced. Of the show it may be said that it was by far more interesting than the finest exhibition of plants by gardeners. It brought out the ingenuity of the young aspirants to horticultural honours. Imagine one producing a young chesnut tree, another an oak, a third a walnut tree, another an orange tree, all from their several nuts, pips, or seeds; for prizes were given for things not in bloom, and therefore nothing was excluded. The mixture defies all description; it was creditable to all the parties, and the reverend gentleman who inaugurated it has set an example that should be followed by every pastor, as the best possible means of humanizing the infantile ruffianism which disgraces many metropolitan localities and manufacturing towns. Mr. Beaton, who vamps up other people's ideas and would take credit for their originality, records as the result of his observations, "that life is longest, and the working-classes are the most moral and well-to-do, when a fondness for gardening prevails." He might have read any time within the last thirty years the same truths better expressed. We have never written a report of the country cottager shows without proving that wherever the humble classes are encouraged to show, it has always "improved their moral and social condition." Scores of times have we begged of the higher classes to give the poor bits of ground as the means of bettering their condition, and largely has this been carried out in many parts of the kingdom. We have incessantly urged this; but the Rev. Mr. Bayley has thrown a new light on the means of inculcating a love of gardening, he has brought it within the means of the humblest of children and offered new and rational amusement that cannot fail to lead his followers to better things We shall devote a portion of our paper now and then to the instruction of his followers, and heartily do we again thank him for the opportunity. Before the rev. gentleman announces another show, we shall consider whether we cannot, under his sanction, add to his prizes some of our works that he may think appropriate, and for subjects that may not have entered the minds of those humble aspirants, but which will succeed under their yet unpractised hands.

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TO FORM FLOWER GARDENS GEOMETRICALLY.

In almost all places where an attempt is made to keep up a garden, there is a portion devoted to choice dwarf flowers. In some places, this is done by cutting out figures on the lawn near the house. In others, a small space is devoted to a series of beds with narrow gravel walks between, and the figure is necessarily different to any they cut on grass. Wherever the figure is formed on grass, the space between the beds may be wide and unequal; but when formed of gravel, it must be the same width all over. The simplest method of preserving uniformity in beds of any kind, and of obtaining various shapes, is to draw a number of circles, after the fashion of those stars and Turks'-caps which used to form the playthings of boys at school (sometimes to ornament a kite), by first drawing a single circle with the compasses, and then drawing others around it; by first placing the point on the outer edge and drawing a second, which will of course cross the first circular line in two places, the point may next be placed on the spot where the lines cross, and these again on the place where the second circle crosses, and continue this until you have drawn circles round every place where the circular lines cross. This may be continued until you have drawn a third series of circles outside the second, and by the same rule of placing the point wherever the new circle crosses the old ones. If you please, you may now alter your compasses to a measure half the width of the first, and then draw a small circle within every one of the large ones; you will find the lines so intersecting each other as to make a thousand different divisions, and your fancy may appropriate these in any way you please, so that you take care the beds or divisions shall be free of each other, and uniform. In short, with the papers thus marked, if you have fifty of them you will be able to make fifty different patterns, only by filling up a different set of divisions in each pattern. In selecting these you have to take care that the beds or divisions you appropriate are connected in size with the quantity of lawn or grass left between, for beds cut on grass must not be too near, nor at all crowded. The annexed specimens of beds formed by the easy means we have mentioned would do well for lawns. They are worked out with the compasses only, and it is no bad amusement to diversify the exercise of these useful instruments for the express purpose of bringing out new forms. For instance, by making half circles from some points, to bring out a series of novel clumps, and by working the compasses along a line so as to make an elongated figure, the design may be greatly varied. This enables us to bring out oblong figures, which are also adapted for grass. In making provision for narrow gravel walks and box edgings, the compasses must be made to draw a double line instead of a single one, because the double line forms the walk, and ensures a similar width all over. It is impossible to imagine the beautiful effect that can be produced by dwarf flowering plants, when the heights and colours are arranged discreetly and uniformly with due regard to the blooming season.

In laying out these gardens, a peg and a line are used instead of compasses; the use of a six-foot line would make twelve-feet circles, and they must be drawn as perfectly on the ground as on the paper; the peg

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should be iron; the line should be double, and be tied at the ends, because each end is then a sort of loop; but a single line with a short loop at each end would do: the one goes over the peg, the other we put the marking-iron in, so that by walking round and marking as we go, we form a complete circle: by carefully moving the peg to any part of the edge of the circle, we can draw another circle, and again remove the peg to where the lines cross, and draw another, and so on, the same as you would on paper. If this has to be done on a lawn, the circular marks can be best made with white pegs, unless a cutting instrument is used that will mark clearly without damaging the grass too much, because the lines will go over parts that are to be left as lawn, and consequently if damaged much could not be set to rights without relaying the turf. Pegs, therefore, are mostly used, and placed pretty close together; and as soon as the necessary circles are all drawn, the portions to be cut out have the turf pared off exactly to the size and shape. These general rules will be found to comprise nearly all the art of laying out such gardens. Those with gravel walks and box edgings are more troublesome, because when marked out the paths have to be dug, and the stuff thrown on to the clumps, the edges neatly pared up like a sloping bank, the box laid along very even, and banked up from the path side—the paths are then filled with gravel, and neatly levelled and rolled. But work of this kind once done is done for always; and as it is showy and will repay the labour, a little trouble should not be thought of. These little flower gardens are greatly ornamental in all establishments, if planted and kept well replenished.

TULIP EXHIBITIONS.

[We have given the abbreviations, and we may almost say nick-names peculiar to the localities.—Ed.]

MIDLAND COUNTIES.

Held at the "Sherwin Arms," Bramcote.

Judges.—Messrs. W. R. Lymbery, Marshall, and Frearson.

1. Pan of 6 Flowers to David Barber, for Platoff, Duke of Devonshire, Abott's Gem, John Franklin, Heroine, Aglaia.
2. Pan to Mr. Bordican, for Royal Sovereign, Pilot, Abott's Gem, La Bein Amie, Hero of the Nile, Aglaia.
3. Pan to John Atkin, jun., for Charles Napier, Captain White, Maid of Orleans, La Bein Amie, Heroine, Lady Jane Grey.
4. Pan to Thomas Greasley, for Royal Sovereign, Merit, Victoria Regina, Wonderful, Count Virginness, Kate Connor.
5. Pan to John Aitkin, sen., for Royal Sovereign, Polyphemus, Chelleston, Anastacia, Vicar of Radford, Aglaia.
6. Pan to Mr. Thomas Gibbons, for Cabinet Minister, Pilot, Maid of Orleans, Princess Royal, Triumph Royal, Lady Jane Grey.

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7. Pan to Mr. Disley, for Duke of Devonshire, Polyphemus, Maid of Orleans, Duke of Orleans, Mary Lamb, Cirece Bell Forme.

8. Pan to Mr. Brown, for John Rawdin Brown, Captain White, Irene, Lord Denman, Heroine, Aglaia.

9. Pan to Mr. Oldham, for Charles X., Polyphemus, Blondo, Duke of Orleans, Heroine, Aglaia.

10. Pan to Mr. Clifford, for Duke of Devonshire, Pilot, Duke of Orleans, Maid of Orleans, Duchess of Sutherland, Aglaia.

11. Pan to Mr. Waters, for Royal Sovereign, Polyphemus, Duchess of Sutherland, Princess Royal, Heroine, Unknown.

12. Pan to Mr. Smedley, for Magnum Bonum, Pilot, Lawrences Friend, Queen Charlotte, Heroine, Aglaia.

13. Pan to Mr. Alfred Towle, for Royal Sovereign, Captain White, Rose Elizabeth, Georgiana, Violet Alexander, Baggott.

Class Showing.

Feathered Bizarres.—1. Prime Minister, David Barber. 2. Masterpiece, J. Atkin, jun., 3. Royal Sovereign, Barber. 4. John Rawdin Brown, J. Brown. 5. Magnum Bonum, J. Brown. 6. Devonshire, A. Towle. 7. Willison's King, J. Atkin, jun.

Flamed Bizarres.—1. Merit, J. Atkin, sen. 2. Pilot, Mr. Bordican. 3. Devonshire, A Towle. 4. Joseph Paxton, Mr. Disley. 5. Captain White, Mr. Oldham. 6. Delaforces King, Mr. Barber. 7. Donzelli, Mr. Bordican.

Feathered Byblomens.—1. Chelleston Beauty, Mr. Barber, 2. Maid of Orleans, Mr. Clifford. 3. Sancta Sophia, Mr. Bordican. 4. Victoria Regina, Mr. Barber. 5. Beauty of Virginia, Mr. Barber. 6. Lawrences Friend, Mr. Disley. 7. General Barneveld, Mr. Waters.

Flamed Byblomens.—1. Princess Royal, Mr. Gibbons. 2. Lord Denman, Mr. Brown. 3. Violet Alexander, Mr. Towle. 4. General Barneveld, Mr. Greasley. 5. Maid of Orleans, Mr. Clifford. 6. Queen Charlotte, Mr. Clifford. 7. Sir J. Franklin, Mr. Smedley.

Feathered Roses.—1. Midland Beauty, Mr. Barber. 2. Aglaia, Mr. Barber. 3. Heroine, Mr. Atkin, jun. 4. Georgiana, Mr. Towle. 5. Duchess of Sutherland, Mr. Aitkin, jun. 6. Unknown, Mr. Oldham. 7. Lady Lilford, Mr. Atkin, sen.

Flamed Roses.—1. Aglaia, Mr. Waters. 2. Triumph Royal, Mr. Disley. 3. Lady C. Gordon, Mr. Barber. 4. Emily, Mr. Barber. 5. La Van Dicken, Mr. Atkin, sen. 6. Aglaia, Mr. Waters. 7. Lady Jane Grey, Mr. Atkin, sen.

Bizarre Breeders.—1. Seedling, Mr. Atkin, jun. 2. Truth, Mr. Greasley. 3. Seedling, Mr. Brown. 4. Seedling, Mr. Barber.

Byblomen Breeders.—1. Seedling, Mr. Greasley. 2. Seedling, Mr. Smedley. 3. Chancellor, Mr. Barber. 4. Seedling, Mr. Brown.

Rose Breeders.—1. Seedling, Mr. Greasley. 2. Disleys, No. 1., Mr. Towle. 3. Rosy Gem, Mr. Barber. 4. Gibbons's, No. 1., Mr. Gibbons.

Communicated by J. Winfield, Stapleford.

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BLACKBURN AMATEUR TULIP SHOW.

The Judges were Mr. J. Baron, and Mr. R. Houseman, and their decisions were well received. The following is a list of the prizes awarded:—

Maiden Prize—Waterloo, Mr. Thomas Speight.
Premier Prize—Charles X., Mr. Isaac Hadfield.

Feathered Bizarre.—1. Charles X., 5 Catafalque, Mr. Fairbrother. 2. Devonshire, Mr. Waterhouse. 3. Waterloo, Mr. Speight. 4. Sidney, 6 Truth, 7 Surpass Cat, Mr. W. Haworth.

Flamed Bizarre.—1. Sanzoe, Mr. R. Haworth. 2. Catafalque, 4 Charles X., 7 Truth, Mr. Monk. 3. Masterpiece, 5 Charbonnier, Mr. Fairbrother. 6. Paganini, Mr. Foulds.

Feathered Byblomens.—1. Beauty, 4 Violet Amiable, Mr. Monk. 2. Bein Fait, Mr. R. Haworth. 3. Jane, Mr. Fairbrother. 5. Lewold, 7 Narrene, Mr. Hadfield. 6. Lady Denman, Mr. W. Haworth.

Flamed Byblomens.—1. Incomparable, 6 Lord Rawcliff, Mr. R. Haworth. 2. Queen Charlotte, 3 Alice, 4 Bein Fait, 5 Beauty, 7 Bouquet, Mr. Fairbrother.

Feathered Rose.—1. Lady Crewe, 6 Kate Conner, Mr. Hadfield. 2 Queen Isabella, 5 Triumph, Mr. Monk. 3. Sarah, Mr. Foulds. 4. Martins, Mr. Pemberton. 7. Hero of the Nile, Mr. Waterhouse.

Flamed Roses.—1. Vandicken, Mr. Waterhouse. 2. Aglaia, 7, Queen Phillipa, Mr. Fairbrother. 3. Lady C. Gordon, 4 Kate Conner, 5 Vesta, Mr. R. Haworth. 6. Lady Lilford, Mr. Monk.

Bizarre Breeders.—1. Ariosta, 2 Charbonnier, 3 Duke of Kent, 4 Martins, 5 Standard, Mr. Fairbrother.

Byblomen Breeders.—1. Sir H. Pottinger, 2 Alice, 3 Sancta, 4 Lady Seymour, 5 William Bentley, Mr. Fairbrother.

Rose Breeders.—1. Madame St. Arnaud, Maid of Harwood, Mr. Monk. 3. Martins, 5 Lady Franklin, Mr. Haworth. 4. Agnes, Mr. Fairbrother.

Selfs.—1. Model, Mr. Hadfield. 2. Min D'or, 3 Perfection, Mr. Fairbrother.

STOCKPORT.

The annual exhibition of the original Lancashire Hill Tulip Show took place at the house of Mr. William Hale, "Gray Horse," Lancashire Hill.

Feathered Premier Prize—Gold Medal, Edgar, William Smith.
Flamed Premier—Brass Pan, Sanzoe, W. Smith.
First Maiden Prize—Kettle, Charles X., James Barrett.
Second Maiden Prize—Kettle, Magnum, Charles Chadwick.

Feathered Bizarres.—1. Charles X., W. Alsop (Kettle). 2. Devonshire, James Hulme. 3. Charles X., W. Smith. 4. Magnum, C. Chad-

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wick. 5. Masterpiece, G. Greaves. 6. Surpas Cat, James Hulme. 7. Apelles, W. Alsop. 8. Earl Radnor, S. Brown.

Flamed Bizarres.—1. Sanzoe, W. Smith (Kettle). 2. Sanzoe, W. Smith. 3. Duke of Lancaster, W. Alsop. 4. Duke of Devonshire, C. Chadwick. 5. Duke of Kent, W. Alsop. 6. Paul Pry, W. Alsop. 7. Lustre, S. Brown. 8. Earl Radnor, T. Simpson.

Feathered Byblomens.—1. Edgar, W. Smith (Kettle). 2. Beauty, W. Smith. 3. Lancashire Hero, W. Smith. 4. Bien Fait, W. Smith. 5. Edgar, James Hulme. 6. Sportsman, W. Alsop. 7. Gibbons, S. Barratt. 8. Sir Henry Pottinger, W. Smith.

Flamed Byblomen.—1. Bien Fait, S. Browne. 2. La Belle Narene, W. Alsop. 3. Beauty, W. Smith. 4. Denman, W. Alsop. 5. Duke de Bourdeaux, S. Brown. 6. Queen Adelaide, W. Smith. 7. Van Hamburg, W. Smith. 8. Sir H. Pottinger, S. Barratt.

Feathered Rose.—1. Compte, W. Alsop (Kettle). 2. Crew, W. Alsop. 3. Heroine, W. Alsop. 4. Andromeda, W. Alsop. 5. Compte, W. Smith. 6. Newcastle, W. Smith. 7. Amelia, W. Smith. 8. Doolittle, W. Tildes.

Flamed Roses.—1. Unique, W. Smith (Kettle). 2. Unique, Thos. Barratt. 3. Vesta, G. Greaves. 4. Fairy Queen, S Brown. 5. Aglaia, T. Barratt. 6. Crew, S. Brown. 7. Andromeda, G. Greaves. 8. Lady Lilford, G. Greaves.

Rose Breeders.—1. Lord Derby, W. Smith. 2. Lady Stanley, T. Barratt. 3. Village Maid, J. Barratt. 4. Rosy Gem, W. Smith. 5. Lady Lilford, G. Greaves.

Byblomen Breeders.—1. Sancta Sophia, W. Smith. 2. Lord Vernon, W. Hill. 3. Godetperfait, W. Smith. 4. Bucephalus, Joseph Barratt. 5. Beauty, S. Brown.

Bizarre Breeders.—1. Earl Radnor, W. Smith. 2. Polyphemus, S. Brown. 3. King, W. Alsop. 4. Beethoven, S. Brown. 5. Vivid, S. Brown.

Best Yellow.—1. Model, W. Smith. 2. White Flag, James Barratt.

Judges.—Messrs. Thomas Leich, Holey Hill. William Waller, Ashton. Mr. Chadwick, Bollington.

SOUTH LANCASHIRE TULIP SHOW.

This took place at the house of Mr. Jonathan Hague, "Red Lion Inn," Stockport.

Premium Feathered—Charles X., W. Smith.
Premium Flamed—Sanzoe (Gold Medal), W. Smith.
First Maiden Prize—Charles X. (Set of China), Charles Chadwick.
Second Maiden Prize—Lord Lilford (Kettle), James Barrett.

Feathered Bizzares.—1. Charles X., W. Smith. 2. Charles X., W. Smith. 3. Lord Lilford, W. Smith. 4. Magnum, S. Brown. 5. Cat, James Barrett. 6. Devonshire, S. Brown. 7. Roi de Navarre, W. A. Cross. 8. Rising Sun, S. Brown.

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FLAMED BIZARRES (Kettle).—1. Sanzoe, W. Smith. 2. Sanzoe, W. Smith. 3. Duke of Lancaster, W. Alsop. 4. Polyphemus, W. Smith. 5. Earl Radnor, James Barratt. 6. Pilot, G. Greaves. 7. Sir Joseph Paxton. 8. Harry Bluff, James Barrett.

FEATHERED BYBLOMENS (Kettle).—1. Bien Fait, W. Alsop. 2. Amiable, W. Alsop. 3. Bien Fait, W. Smith. 4. Lewold, W. Smith. 5. Angelina, W. Alsop. 6. Sutherland, W. Alsop. 7. Beauty, W. Smith. 8. Unknown, W. Smith.

FLAMED BYBLOMENS.—1. Lord Denman, W. Smith. 2. Bacchus, J. Barrett. 3. Lord Denman, W. Smith. 4. Van Hamburg, W. Smith. 5. La Belle Narene, J. Barrett. 6. Pottenger, Thomas Barrett. 7. Bagguet, W. Hill. 8. Unknown, W. Smith.

FEATHERED ROSE (Kettle).—1. Mason's Matilda, W. Smith. 2. Mrs. Lea, James Hague. 3. Compte, W. Smith. 4. Heroine, James Barratt. 5. Newcastle, W. Smith. 6. Lady Crew, W. Smith. 7. Andromeda, G. Greaves. 8. Arlette, W. Smith.

FLAMED ROSE (Kettle).—1. Lavandicken, W. Smith. 2. Unique, W. Smith. 3. Lavandicken, T. Barrett. 4. Lady Catharine Gordon, W. Smith. 5. Aglaia, James Barrett. 6. Triumph Royal, S. Brown. 7. William, James Barrett. 8. Lady Lilford, James Hague.

BIZARRE BREEDERS.—1. Willison's King, W. Smith. 2. Earl Radnor, W. Smith. 3. Sir Joseph Paxton, James Barrett. 4. Polyphemus, W. Smith. 5. Duke of Hamilton, J. Barrett. 6. Atticas, J. Barrett.

BYBLOMEN BREEDERS.—1. Unknown, James Hague. 2. Headeley's Adonis, W. Smith. 3. Sancta Sophia, W. Smith. 4. Earl Warwick, James Hague. 5. Sutherland, James Barrett. 6. Jepthe, James Barrett.

ROSE BREEDERS.—1. Rosy Gem, W. Smith. 2. Arlette, W. Smith. 3. Mrs. Lea, J. Hague. 4. Lord Derby, J. Barrett. 5. Lady Lilford, J. Barrett. 6. Catherine, G. Greaves.

BEST YELLOW.—J. Barrett.

BEST WHITE.—J. Barrett.

Judges.—Messrs. Thomas Leich, John Hulton, and Mr. Chadwick.

BUTLEY TULIP SHOW.

The Thirty-sixth Tulip Meeting was held at the house of Mrs. Kitchen, "Orange Tree," Butley, near Macclesfield.

Premier Prize (Silver Cup.)—Mr. P. Swindells, with Charles X., Bien Fait, Heroine, Sauzoe, Purple Perfection, Unique.

Maiden Prize.—Mr. W. Browne with Bien Fait.

FEATHERED BIZARRES.—1. Mr. Howley, Charles X. 2. Mr. Nunnerly, Magnum. 3. Mr. Hooley, Charles X. 4. Mr. Nunnerley, Devonshire. 5 Mr. Hooley, Cat. 6. Mr. Nunnerley, Ethelston. 7. Mr. Swindells, Royal Gem. 8. Mr. Nunnerley, Dentonian. 9. Mr. Potts, Elizabeth. 10. Mr. Hooley, Catafalque.

FLAMED BIZARRES.—1. Mr. Hooley, Zanzoe. 2. Mr. Hooley,

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Zanzoe. 3. Mr. Potts, Pilot. 4. Mr. Swindells, Polyphemus. 5. Mr. Potts, Paul Pry. 6. Mr. Swindells, Caliph. 7. Mr. Hooley, Charles X. 8. Mr. Nunnerley, Milton. 9. Mr. Potts, Donzella. 10. Mr. Hooley, S. Cat.

Feathered Byblomen.—1. Mr. Nunnerley, Edgar. 2. Mr. Swindells, Bien Fait. 3. Mr. Hooley, Edgar. 4. Mr. Nunnerley, Amiable. 5. Mr. Hooley, Flora Hastings. 6. Mr. Potts, Denman. 7. Mr. Nunnerley, Lord Gough. 8. Mr. Nunnerley, Beauty, 9. Mr. Potts, Sportsman. 10. Mr. Hooley, Narene.

Flamed Byblomen.—1. Mr. Potts, Bacchus. 2. Mr. Swindells, Surpassant. 3. Mr. Potts, Beauty. 4. Ditto, Walters. 5. Ditto, Denman. 6. Ditto, Pottinger. 7. Ditto, Vernon. 8. Ditto, Magnus. 9. Hooley, Baguet. 10. Ditto, Flora.

Feathered Roses.—1. Mr. Potts, Compte. 2. Mr. Hooley, Heroine. 3. Mr. Hooley, Compte. 4. Mr. Nunnerley, Aglaia. 5. Mr. Nunnerley, Crew. 6. Swindells, Mr. Newcastle. 7. Mr. Nunnerley, Mrs. Dixon. 8. Mr. Potts, Lady C. Gordon. 9. Mr. Potts, Andromeda. 10. Mr. Stanhope, Doolittle.

Flamed Roses.—1. Mr. Potts, Unique. 2. Mr. Potts, Unique. 3. Mr. Swindells, Aglair. 4. Mr. Nunnerley, Lady C. Gordon. 5. Mr. Hooley, Lavandyke. 6. Mr. Hooley, Andromeda. 7. Mr. Potts, Ponceau. 8. Mr. Potts, Derby. 9. Mr. Hooley, Georgius Tertius. 10. Mr. Potts, Vesta.

Bizarre Breeders.—1. Mr. Hooley, Catafalque. 2. Mr. Potts, Elizabeth. 3. Mr. Nunnerley, Major Hibbert. 4. Mr. Potts, Hector. 5. Mr. Nunnerley, Hamilton. 6. Mr. Horley, Pilot.

Byblomen Breeders.—1. Mr. Potts, Ambury. 2. Mr. Potts, Godet Parfait. 3. Mr. Nunnerley, Duchess of Sutherland. 4. Mr. Swindells, Orleans. 5. Hooley, Purple Perfection. 6. Nunnerley, Miss Forrest.

Rose Breeders.—1. Mr. Hooley, Derby. 2. Mr. Hooley, Lilford. 3. Mr. Nunnerley, Bion. 4. Mr. Swindells, Unknown. 5. Mr. Browne, Unknown. 6. Mr. Nunnerley, Unknown.

Yellow Self.—Min d'Or, Mr. Swindells.

White Self.—Perfection, Mr. Swindells.

Beston Pair.—Mr. Nunnerley, with Charles X., Sanzoe.

WAKEFIELD TULIP SHOW.

Held at the "Brunswick Hotel." The following are the awards:—

Best pan of six rectified Tulips, a silver watch valued five pounds.—Mr. Thomas Parker, with Plato, Merit, Lady Denman, Lord Denman, Aglaia feathered, Aglaia flamed. 2nd pan, a copper kettle, Mr. Joseph Steel for Plato, Napoleon, Grace Darling, Siam, Lady Crewe, Aglaia. 3rd pan, a metal tea-pot, Mr. William Mellor for Platoff, Pilot, Lady Denman, Lord Denman, Heroine, Aglaia.

Best pan of Breeders.—Mr. William Mellor, with Duchess of Sutherland, Queen of England, Conqueror of the World. 2nd, Mr. Thomas

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Parker for seedling, Emperor, Queen of England, Willison King. 3rd, Mr. John Gill, Pilot, Queen of England, Gills, Captain Nolan.

PREMIUMS.—Best Feathered Tulip, extra prize, Mr. Thomas Parker, for Lord Lilford. Best Rectified Tulip, Mr. Thomas Parker, Lord Lilford. Best Feathered Rose, Mr. Thomas Parker, for Lady Crewe. Best Flamed Byblomen, Mr. Abraham Holmes von Hamburg. Best Breeder, Mr. William Mellor, for Parker's Queen of England.

FEATHERED BIZARRES.—1. Thos. Parker, Lord Lilford. 2. A. Holmes, Platoff. 3. A. Holmes, Platoff. 4. T. Parker, Platoff. 5. W. Mellor, Duke of Devonshire. 6. George Gill, Duke of Devonshire.

FLAMED BIZARRES.—1. W. Mellor, Pilot. 2. A. Holmes, Napoleon. 3. G. Gill, Pilot. 4. W. Mellor, Bolivar. 5. T. Parker, Pilot. 6. A. Holmes, Napoleon.

FEATHERED BYBLOMEN.—1. W. Mellor, Addison. 2. T. Parker, Addison. 3. G. Gill, Lord Ashburton. 4. T. Parker, Lady Denman. 5. W. Mellor, Flora Hastings. 6. W. Mellor, Lady Denman.

FLAMED BYBLOMEN.—1. A. Holmes, Van Hamburgh. 2. A. Holmes, Van Hamburgh. 3. John Gill, Van Hamburgh. 4. A. Holmes, Prince Albert. 5. A. Holmes, Duchess of Sutherland. 6. J. Steel, Royal George.

FEATHERED ROSES.—1. T. Parker, Lady Crewe. 2. J. Steel, Lady Crewe. 3. T. Parker, Lady Crewe. 4. G. Gill, Lady Denman. 5. T. Parker, seedling. 6. A. Holmes, Aglaia.

FLAMED ROSES.—1. John Gill, Lady Stanley. 2. Thomas Gill, Triumph Royal. 3. T. Parker, Aglaia. 4. John Gill, Scarlet Le Grand. 5. A. Holmes, Triumph Royal. 6. Thos. Gill, Triumph Royal.

BIZARRE BREEDER.—1. W. Mellor, Pilot. 2. Thos. Parker Willison, King. 3. W. Mellor, King. 4. W. Mellor, King. 5. W. Mellor, Pilot. 6. G. Gill, Perfection.

BYBLOMER BREEDERS.—1. Seedling Emperor, T. Parker. 2. A. Holmes, Benjamin. 3. G. Gill, Captain Nolan. 4. T. Parker, Sarah Ann. 5. T. Parker, Midland Beauty. 6. W. Mellor, Midland Beauty.

ROSE BREEDERS.—1. T. Parker, Juliot. 2. W. Mellor, Catherine. 3. W. Mellor, Juliot. 4. G. Gill, Queen of England. 5. W. Mellor, Catherine. 6. T. Parker, Seedling.

SELFS.—1. W. Mellor, Yellow Beauty. 2. W. Mellor, Ashton White.

BLACKBURN TULIP SHOW.

Held at the house of Thomas Smith, "Holt Mill," near Blackburn.

Extra Premier Prize—1. Thomas Gibson, Charles X. and La Vandicken, other Premiers. 2. John Baron, Charles X. and Charles X. 3. Robert Chippendale, San Zoe and Amiable. 4. John Cleyg, Charles X. and Aglaia. 5. Richard Chippendale, Waterloo and Lady Petre. 6. Edward Hodgson, Charles X. and Charles X. 7. Richard Birtwistle, Sidney and Andromeda.

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FEATHERED BIZARRES.—1. Thomas Gibson, Charles X. 2. Thomas Gibson, Sydney. 3. Thomas Gibson, Truth. 4. Thomas Gibson, Devonshire. 5. Richard Birtwistle, Gold Finder. 6. John Baron, Duke of Wellington.

FLAMED BIZARRES.—1. Thomas Gibson, Polly. 2. John Baron, Charles X. 3. Thomas Gibson, Devonshire. 4. Richard Chippendale, Rufus. 5. Thomas Gibson, Pilot. 6. Thomas Gibson, Don Cossack.

FEATHERED BYBLOMENS.—1. Thomas Gibson, Bien Fait. 2. Edward Hodgson, Winner. 3. Thomas Gibson, Beauty. 4. Thomas Gibson, Maid of Orleans. 5. James Fould, Unknown. 6. John Baron, Unknown.

FLAMED BYLBOMENS.—1. Thomas Chippendale, Denman. 2. Thomas Gibson, Bernivald. 3. Edward Hodgson, Bien Fait. 4. Thos. Gibson, Lord Wharncliffe. 5. Thos. Gibson, Maid of Orleans. 6. James Foulds, Magnes.

FEATHERED ROSES.—1. Edward Hodgson, Madame St. Arnaud. 2. Thos. Gibson, Triumph. 3. Richd. Birtwistle, Andromeda. 4. Edwd. Hodgson, Crewe. 5. John Baron, Sarah. 6. James Foulds, Unknown.

FLAMED ROSES.—1. Thomas Gibson, Madame St. Arnaud. 2. Edwd. Hodgson, Lord Derby. 3. John Clegg, Aglaia. 4. Thos. Gibson, Gladstone. 5. Thos. Gibson, Rose Quarto. 6. John Baron, Unknown.

BIZARRE BREEDERS.—1. John Baron, Lord Darnley. 2. Richard Birtwistle, Oresta. 3. Edward Hodgson, Unknown. 4. Thos. Gibson, King.

BYBLOMEN BREEDERS.—1. Richd. Chippendale, Earl of Warwick. 2. Edwd. Hodgson, Seedling. 3. Thomas Gibson, Seedling. 4. Richd. Chippendale, Seedling.

ROSE BREEDERS.—1. Robert Chippendale, Seedling. 2. Robt. Chippendale, Seedling. 3. Edwd. Hodgson, Madame. 4. Edwd. Hodgson, Seedling.

SELFS.—1. Thomas Gibson, Min d'Or. 2. Richard Chippendale, White Perfection.

FLAMED BYBLOMENS.—1. Thomas Chippendale, Denman. 2. Nathan Catterall, Seedling. 3. Thomas Gibson, Barnevelde. 4. Thomas Gibson, Maid of Orleans. 5. Thomas Gibson, Violet Perfection. 6. Edward Hodgson, Bien Fait. 7. Edward Hodgson, Pyramid.

FEATHERED ROSES.—1. Thomas Gibson, Lady Crewe. 2. Edward Hodgson, Madame. 3. Thomas Gibson, Triumph. 4. Thomas Gibson, Rose Gem. 5. Nathan Catterall, Andromeda. 6. Edward Hodgson, Newcastle. 7. John Baron, Sarah.

FLAMED ROSES.—1. Thomas Gibson, Madame Saint Arnaud. 2. Thomas Gibson, Aglaia. 3. Thomas Gibson, La Vandicken. 4. John Baron, Fairy Queen. 5. Thomas Gibson, Hebe. 6. Thomas Gibson, Ponceau Brilliante. 7. Thomas Gibson, Rose Primo.

BIZARRE BREEDERS.—1. John Baron, Lord Darnley. 2. Richard Birtwistle, Oresta. 3. John Baron, Duke of Kent. 4. Thomas Gibson, Willison's King. 5. Edward Hodgson, Colbert. 6. Edward Hodgson, Seedling.

BYBLOMEN BREEDERS.—1. Thomas Gibson, Sancta Sophia. 2. Richard Birtwistle, Pottinger. 3. Edward Hodgson, Adonis. 4. Richard Birt-

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wistle, Seedling. 5. John Baron, Lady Franklin. 6. Edward Hodgson, Unknown.

Rose Breeders.—1. Edward Hodgson, Madame Saint Arnaud. 2. Robert Chippendale, Seedling. 3. John Baron, Seedling. 4. Richard Birtwistle, Seedling. 5. Robert Chippendale, Seedling. 6. Edward Hodgson, Seedling.

Selfs.—1. John Baron, Min d' Or. 2. Thomas Gibson, White Perfection.

GREAT HARWOOD TULIP SHOW.

Held at the house of Edward Hodgson, "Lomax Arms" Inn, Great Harwood, June 1st, 1861.

Extra Premier Prize—Brass Pan. 1. Thomas Gibson, Charles X., and Pilot.

Steward's Prize—2. Robert Chippendale, Sidney and San Zoe. 3. Edward Hodgson, Charles X., and Aglaia. 4. Richard Birtwistle, Andromeda and Charles X. 5. Thomas Chippendale, Juno and San Zoe. 6. John Baron, Crewe and Charles X. 7. Nathan Catterall, Trafalgar and Polly.

Feathered Bizarres.—1. Thomas Gibson, Charles X. 2. Thomas Gibson, Sydney. 3. John Baron, Devonshire. 4. Thomas Gibson, Truth. 5. Robert Chippendale, Waterloo. 6. Robert Chippendale, Lord Lilford. 7. Robert Chippendale, Royal Gem.

Flamed Bizarres.—1. Robert Chippendale, Charles X. 2. Thomas Gibson, San Zoe. 3. Thomas Gibson, Devonshire. 4. Thomas Gibson, Sulphur. 5. John Baron, Polly. 6. John Baron, Charles X. 7. Thomas Chippendale, Pilot.

Feathered Byblomens.—1. Thomas Gibson, Bien Fait. 2. Thomas Gibson, Beauty. 3. Robert Chippendale, Violet Amiable. 4. John Baron, Winner. 5. Thomas Chippendale, Violet Perfection. 6. Thomas Chippendale, Victoria Regina. 7. Thomas Chippendale, Don Pedro.

THE ESTMORE FLOWER SOCIETY

Held their Annual Tulip Show at the house of Mr. Wood, the "Fox and Grapes" Inn.

Judges—Mr. Whittaker, of Manchester; Mr. A. Holmes; and Mr. Thomas Parker, of Wakefield.

Best Six Rectified Blooms (a Silver Cup). 1. Mr. W. Mellor, with Lord Lilford, Charles X., Princess Royal, Salvator Rosa, Lady Crewe, Aglaia. 2. Mr. George Gill, Napoleon, Charles X., Reliance, Princess Royal, Criterion, Triumph Royal. 3. Mr. J. Gill, Napoleon, John Hampden, Lord Vernon, Princess Royal, Criterion, Triumph Royal.

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BEST THREE BREEDERS.—1. Mr. W. Mellor for Conqueror, Gibbins, Duchess of Sutherland, Parker's Queen of England. 2. Ditto, Mr. Charles Gill of New Millerdam, Gill's Criterion, Seedling Catherine. 3. Mr. J. Gill, jun., for Criterion, Sarah Ann, Catherine.

FEATHERED BIZARRES.—1. W. Mellor, Napoleon. 2. W. Mellor, Platoff. 3. G. Gill, Napoleon. 4. John Gill, Napoleon. 5. John Gill, Napoleon. 6. Charles Gill, Duke of Devonshire.

FLAMED BIZARRES.—1. G. Gill, Charles X. 2. G. Gill, John Hampden. 3. C. Gill, John Hampden. 4. J. Gill, Charles X. 5. C. Gill, Charles X. 6. C. Gill, Charles X.

FEATHERED BYBLOMEN.—1. G. Gill, Gill's Reliance. 2. W. Mellor, Lady Denman. 3. W. Mellor, Maid of Orleans. 4. C. Gill, Isabella. 5. W. Mellor, Maid of Orleans. 6. C. Gill, Victor Emanuel.

FLAMED BYBLOMEN.—1. G. Gill, Princess Royal. 2. J. Gill, Princess Royal. 3. W. Mellor, Princess Royal. 4. G. Gill, Princess Royal. 5. W. Mellor, Lord Denman.

FEATHERED ROSES.—1. John Gill, Duchess of Sutherland. 2. William Mellor, Duchess of Sutherland. 3. W. Mellor, Lady Denman. 4. W. Mellor, Heroine. 5. J. Gill, Criterion. 6. C. Gill, Criterion.

FLAMED ROSES.—1. G. Gill, Triumph Royal. 2. J. Gill, Triumph Royal. 3. W. Mellor, Triumph Royal. 4. J. Gill, Triumph Royal. 5. G. Gill, Triumph Royal. 6. J. Gill, Triumph Royal.

BIZARRE BREEDERS.—1. Charles Gill, Criterion. 2. Charles Gill, Criterion, 3. John Gill, King. 4. Charles Gill, Seedling. 5. William Mellor, Sir G. Brown. 6. Charles Gill, Seedling.

BYBLOMEN BREEDERS.—1. W. Mellor, Gibbins. 2. Charles Gill, Seedling. 3. Charles Gill, Seedling. 4. John Gill, Seedling. 5. Charles Gill, Seedling. 6. Charles Gill, Seedling.

ROSE BREEDERS.—1. W. Mellor, Juliet. 2. Charles Gill, Catherine. 3. W. Mellor, Catherine. 4. W. Mellor, Catherine. 5. W. Mellor, Catherine. 6. Charles Gill, Catherine.

PREMIER.—1. George Gill, Reliance; which was sold to Mr. Whittaker of Manchester.

LONGTON TULIP SHOW.

Held at the "Three Tuns" Inn.

First Pan—A. Shaw, Charles X., Sanzoe.
Second Pan—T. Cooper, Bion and Denman.
First Pan—J. Growers, G. Wilson, Magnum, Sanzoe.
Second Pan—J. Hughes, Lawrence's Friend, Dentonia.

FEATHERED BIZARRE.—1. A. Shaw, Charles X. 2. A. Shaw, Charles X. 3. A. Shaw, Rising Sun. 4. A. Shaw, Magnum. 5. T. Cooper, Dentonia. 6. A. Shaw, Elizabeth. 7. G. Wilson, Devonshire.

FEATHERED BYBLOMEN.—1. A. Shaw, Nora Creina. 2. G. Wilson, Maid. 3. J. Hughes, Lawrence's Friend. 4. A. Shaw, Perfection. 5. A. Shaw, Washington. 6. A. Shaw, Amiable. 7. A. Shaw, Abbot's Gem.

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FEATHERED ROSES.—1. A. Shaw, Compte. 2. A. Shaw, Heroine. 3. J. Hughes, Andromeda. 4. A. Shaw, Lady Peel. 5. J. Hughes, Unknown. 6. A. Shaw, Bacchus. 7. J. Wilson, Andromeda.

FLAMED BIZARRE.—1. A. Shaw, Sanzoe. 2. G. Wilson, Merit. 3. G. Wilson, Charles X. 4. J. Hughes, Dentonia. 5. A. Shaw, Rufus. 6. G. Wilson, Sanzoe. 7. A. Shaw, No. 14 Ashmode.

FLAMED BYBLOMEN.—1. A. Shaw, Lewald. 2. A. Shaw, Denman. 3. A. Shaw, Pandora. 4. A. Shaw, Nora Creina. 5. A. Shaw, J. Whittaker. 6. J. Hughes, Princess Royal. 7. A. Shaw, Modena.

FLAMED ROSE.—1. A. Shaw, L. C. Gordon. 2. A. Shaw, Queen. Henrietta. 3. A. Shaw, Aglaia. 4. A. Shaw, Princess Royal. 5. A Shaw, Emily. 6. A. Shaw, Lady Jane Grey. 7. A. Shaw, Aglaia.

BIZARRE BREEDERS.—1. A. Shaw, Grooms. 2. A. Shaw, Climat Browns. 3. A. Shaw, Tom Boote Browns.

BYBLOMEN BREEDERS.—1. A. Shaw, J. Whittaker. 2. G. Wilson, Unknown. 3. A. Shaw, Warwick.

ROSES.—1. G. Wilson, Anastacia. 2. A. Shaw, Queen Henrietta. 3. A. Shaw, L. C. Gordon.

TEACHING THOSE WHO HAVE ALL TO LEARN.

THE "Suburban Horticulturist" was a work that was to be recommended to beginners; it was ushered into the world by an announcement that made those who complained of most authors commencing their instructions as if people were already gardeners, exclaim—"Aye, that is just what we want." On the very cover of the book it was described—

"An attempt to Teach the Science and Practice of the Culture and Management of the Flower, Fruit, Kitchen, and Forcing Garden, Lawn, Shrubbery, Pleasure-Ground, and Ornamental Plantation, to those who have had no previous knowledge or practice in these departments of Gardening."

Of course, "those who had no previous knowledge" were delighted at the prospect of easy lessons, and of going step by step from one simple task to another; but the following, which appeared in the very first number, astonished them:—

"The grand division of *Exogens* are *Thalamiflorœ*, *Calycoflorœ*, *Corollœflorœ* and *Monochlamydeœ*.

"28. THALAMIFLORÆ.—This is one of the subdivisions of Exogens, which is characterised by the petals of the flowers being distinct, and by the stamens being fixed to the receptacle. There are fifty-eight orders described under this sub-class in our *Hortus Britannicus*, of which those which will be most readily recognised by a general observer, or a beginner, are—*Ranunculaceœ*, *Cruciferœ*, *Malvaceœ*, and *Geraniaceœ*.

"29. *Renunculaceœ*.—Calyx with deciduous sepals; petals, 3-15; stamens numerous; carpels numerous and generally distinct; herbaceous plants, and a few of them suffructicose shrubs, natives of temperate regions of both hemispheres; leaves alternate or opposite, generally lobed or

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much divided; flowers often large and showy; properties, acridity and causticity. Familiar examples of this order are, the clematis, anemone, hepatica, ranunculus, hellebore, columbine, larkspur, monk's-hood, and peony.

"30. *Cruciferæ.*—Sepals and petals, four each; the sepals deciduous, and the petals always arranged in the form of a cross; stamens, four long and two short; stigmas, two; fruit, a pod with seeds in a double line; herbaceous plants, mostly annuals and biennials, natives of most parts of the world; leaves alternate, all simple, and not much cut; flowers yellow or white, rarely purple; properties, antiscorbutic and stimulant, combined with acridity. Familar examples are the common stock, the wall-flower, honesty, shepherd's purse, rocket, cress, cabbage, mustard, sea-kale and radish.

"31. *Malvaceæ.*—Sepals and petals, five each; the sepals generally with bracts upon them; the petals twisted before expansion, and unfolding spirally; the stamens numerous and united together, forming a cylinder round the pistillium; the fruit, a ring of carpels each; single seeded; herbaceous plants, trees, or shrubs, natives of every part of the world; leaves alternate, stipulate, more or less divided; flowers for the most part showy; properties, mucilaginous and wholesome. Familiar examples are the mallow, the hollyhock, the lavatera, the athœa frutesc, and the cotton plant.

"32. *Geraniaceæ.*—Sepals, five; petals, five; stamens, five-ten united together; carpels, five, united to a long elastic style attached at the top to the beak of the receptacle; herbaceous plants or shrubs, with stems tumid and separable at the joints; natives of various parts of the world; and the more showy species almost everywhere cultivated; leaves simple, either opposite or alternate, often lobed and divided, frequently stipulate; flowers showy and bright coloured; properties, astringent and aromatic, or resinous. Familiar examples are, geranium, erodium, and pelargonium.

"33. Other orders belonging to this division are—*Magnoliaceæ*, containing the magnolia and other trees and shrubs (of which, however, there are very few), bearing a close resemblance to this well-known ornamental tree. *Berberidaceæ*—the barberry, and similar shrubs. *Nymphæaceæ*—the water-lily, and similar plants. *Papaveraceæ*—plants with their flowers and fruits of the general structure of the poppy. *Fumariaceæ*—plants resembling the common fumitory. *Resedaceæ*—mignionette, and similar plants. *Cistaceæ*—cistus-like plants, easily recognised by their flowers, and for the most part by their rough leaves. *Violariaceæ*—violet-like plants. *Caryophyllaceæ*—plants bearing a general resemblance to the pink. *Alcinaceæ*—chickweed-looking plants. *Linaceæ*—plants resembling the common flax. *Siliaceæ*—the lime trees. *Camelleaceæ*—the camellias, including the tea plant. *Aurantiaceæ*—the orange trees. *Hypericaceæ*—plants resembling and agreeing in character with the St. John's wort. *Aceraceæ*—trees and shrubs resembling the maple and sycamore. *Hippocastanaceæ*—the horse-chesnuts. *Tropoelaceæ*—the Indian cress species. *Balsamaceæ*—the balsams.

"There are a number of these orders, such as Siliaceæ, Camelliaceæ Aceraceæ, Hippocastanaceæ, &c., which include only one or two genera; and hence, while acquiring a knowledge of the order, a knowledge of

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the genera is obtained at the same time. To recognise these orders, it is necessary for a beginner to see the flowers; but after a little experience most of them may be discovered by the leaves."

By this time our readers will have seen how very plain, simple, and easily understood lessons on "the culture and management" of a garden must be to "those who had no previous knowledge." We confess that, although we had some previous knowledge, such stuff was anything but acceptable. To those who had none it was insulting—not one of the class alluded to could have understood it—yet they might have been taught gardening without a single "hard word."

FLORAL FETES.

THOSE who have had as much to do as we have in the way of getting up these out-of-door entertainments, will endorse all we are about to say on the subject, and be able to add something more.

In country places where the best tents they could muster were from publicans who attended fairs and races, the cricket-club of the village, and one or two other odd things from private parties, we have been struck with the wretched appearance of the patched and many-coloured canvas, and splendid flowers and fruit displayed beneath it; we could not help wishing for the sake of the managers that they had paid some regard to outside show, because no passing stranger would be tempted to look further than the distant view. None but those in the secret could anticipate any thing better inside, and a large class of fashionables would look down with great contempt on such make-shift affairs.

In more than one or two cases we have succeeded in persuading some of the leading people to procure one of Benjamin Edgington's floral tents of large size, and besides using it for their Horticultural Shows, to let it for various out-door meetings of the neighbourhood, for which, when it was once known, there were applications in abundance, and in all cases the tent was paid for in a short time.

In the days of Queen Adelaide we happened to have the getting up of a Fete, on Her Majesty's birthday, and that too in a great hurry. One morning the grounds were all clear, the next day they must be covered, and recollecting that Benjamin Edgington put up for us a tent four hundred feet long in an incredibly short time for a show at Cremorne, we applied to him to do as much as he could in the comparatively few hours. The next morning there were two forty-feet tents, and a circular marquee of fifty feet, full of plants, a splendid tent of great dimensions lined with crimson silk, and accommodations for dancing and dining; fifteen hundred titled persons were occasionally under canvas, and if we had borrowed and begged of all the nobility round, we could not have procured half the quantity in double the time. Those who can command influence are fond of borrowing ordnance tents; but the only way to do a thing respectably is to put the canvas department under one man's management, and you may have ball and supper rooms floored and carpeted, tables and

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covers for any number, and, if wanted, tents enough to encamp an army. The very first thing the managers of shows ought to secure is tent room and neatness. People of rank and even fashionables of no rank are alike taken by appearances. If the tents are shabby many object to attend. Nothing can be more disgusting than two or three different coverings of no form nor fashion, patched and mended; and nevertheless dirty and ragged, yet we have seen all this at country shows, and heard over and over again certain of the inhabitants give as a reason for not attending that "the concern don't look respectable." If the outside of a tent looks shabby, there are very many who will not try the interior; and the society loses more than they fancy they have saved.

THE MANAGEMENT OF VILLA GARDENS.

THOSE who lay themselves out for a continual supply of flowers in a limited garden, must have recourse to the numerous ways of providing one thing under another to supply the places of declining plants, and so keep at all times ready the furniture which is to be displayed, from time to time, in the garden drawing-room, as it were, the place always in sight. This may be done in two ways; by keeping store-beds, from which things are to be taken up in perfection very carefully, and replaced where they are to expand their beauties; or it may be managed yet better by pot culture. In the one case you must remove things under a disadvantage, and sacrifice the health and strength of half-perfected roots and bulbs, or wait while they complete their growth, in which case the garden must be occupied by things out of bloom, and therefore untidy, or without flower; in the other, no sooner is a thing past perfection than it is replaced. Pot culture restricts us, in some measure, to the size of a plant, because, if we constantly shifted them as soon as they required it, so as to spread to a noble size, the pots would be of a most unmanageable size. It is, therefore, necessary to restrain all the plants to a moderate growth. The stock of plants for the garden may consist of all the best of the perennials, and a few of the best of the biennials and annuals. The bulbs for spring blooming are necessarily a considerable time decaying, and if they are potted and plunged into the soil, they can be removed and replaced the instant the bloom decays. There are, however, some plants that are useless as soon as they have done blooming, and may be pulled up and thrown away directly.

Annuals are the most showy in patches, about the size of a thirty-two-sized pot, and therefore if not sown actually on the borders where they are to flower, should be so sown elsewhere as to be easily removed in patches. But the annuals are of two classes; one ought to be sown and thinned out, and allowed to stand where they are to flower; the others ought to be sown, and when large enough, planted out where they are to flower. Of the former we have the Dwarf Larkspur, Collinsia bicolor, Convolvulus minor, Lupinus nanus, Sweet Peas, Erysimum Peroffskianum, and Calliopsis bicolor; of the latter, French Marigold, Nemophila insignis,

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Phlox Drummondii, Ten-week Stock, China Aster, and Balsam, are the better for the check they receive in planting out. But where there is not room to sow all these things where they are to occupy room all the while they are growing without detriment to the garden, the management is as follows:—Sow as many patches of each as you anticipate you will want in a bed in the back garden or nursery; treat them just the same as you would if they were going to bloom there; thin them properly, not allowing more than sufficient to be put together, so as to weaken or draw one another up. Let them all be within the circle marked by a thirty-two-sized pot, and about six strong plants, or from that to eight, even of the smallest subject, is enough. These may be in the nursery-bed until they are far advanced towards showing bloom; when the subjects which they are to succeed are quite exhausted, and begin to look untidy, get a box barrow, and as you wheel it round, take your spade and lift out the whole spade-full of earth with the roots of the plants undisturbed, and lift it into the barrow; do this with all you are removing, whether they are exhausted subjects, dead, and done with, or perennials, or bulbs, which have not completed their growth. Then having left in each place the vacancy occasioned by removing a whole spit of earth, carefully water, so as to soak the ground all through below the roots, all the patches in the nursery bed designed for removal to where they are to bloom, and take up each patch with a full spit of earth, so as not to disturb their roots, and remove them to the vacancies you have left in the garden. They may, with very little dexterity, be so well removed as not in the least to feel the change. The instant they are placed in their positions, give the earth all round a complete soaking, and then settle them in their new places. By these means pots are saved, and there is only a little more trouble. The sowing of those subjects which are to be planted out may be on a slight hot-bed. The seeds may be sown in March on this, not too thickly, otherwise it is a waste. If hand-glasses are used, take care that the seeds are sown within compass of the glasses. If a frame is used, the simplest way of sowing is in drills from front to back, and about six inches from one to the other. The seeds of all the sorts only require to be well covered, and the soil kept rather moist. As soon as they are up they must have air by tilting the sash or light behind. Moisture must not be forgotten, and the lights must be tilted so as to give abundance of fresh air as the seedlings advance, otherwise they would be drawn up. As soon as they are large enough to handle, thin them out a little, and put the plants that you pull out in by the side of the row instead of throwing them away. A few of the balsams may be potted if you have convenience for them, as they make very pretty pot-plants. Here you may give air all mild days, and shut up at night. In a couple of months, if they have had plenty of air to keep them from drawing, they will be in excellent order to plant out into the nursery-bed or the show-garden at once; only recollect the places they are to occupy, the height they are to grow, and the time they are getting into blooming order. By careful observation you can plant many between others that are coming off before the newly-planted ones flower. For instance, in May your Tulips are in bloom, late Narcissus, and other things that have to come away soon. The Nemophila should be close to the front, but the Calliopsis, or Coreopsis, is a taller subject, and must be

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placed behind. The Erysimum Peroffskianum is as short nearly as the Nemophila. Ten-week Stocks, and German or China Asters must not be far back. But, in a general way, Mignionette, Larkspur, Collinsia, Nemophila, Lupinus, Phlox, and Ten-week Stocks, may be said to belong to the front row, and follow Crocuses, Hyacinths, Hepaticas, Polyanthus, Primroses, and similar dwarf things; while the Sweet Peas, Calliopsis, China Aster, Convolvulus, French Marigolds, &c., may be placed a step behind, because they grow taller; and there should also be some other subjects there of a more permanent nature. The annuals, in fact, ought to be an addition only to the perennials, that should always occupy a considerable space. In managing a garden this way, a flower ought not to remain an hour after the bloom decays, but it should be removed with a spit of earth, and something else be placed there with a similar quantity of mould; or if the place is to be filled with transplanted seedlings, why, they need only be pulled up, and the place forked about a little, and dunged, perhaps, before the new ones can be transplanted. On this ground we prefer, even if we have no pots, to plant everything in nursery-beds in patches, so far apart as that we can take them up with a spade-full of earth without disturbing their roots; consequently, keep the show-garden well supplied, not with things that require growing, but with things ready grown, and all but blooming; the garden then never looks *unfurnished*. There are no flagging young plants; when one is past its beauty, it gives place to another ready to burst. Let the garden be laid out the same as for the work of a single month. Let there be abundance of all the early-blooming flowers. Let April see all the colours of the rainbow. Whatever has declined in May, turn out to make way for an abundance of May-blooming subjects. Let all that are turned out be taken up with a spit of earth, and all that take their places be removed in the same way. The nursery-bed that gives up the new subjects can receive the old, and the half-perfected bulbs may complete their growth as well as in the original place; meanwhile, in successive nursery-beds bring forward a succession of subjects. The gay Tulip, the China and Damask China Roses, the Pyrus spectabilis and japonica, Pansies, Wallflowers, double gold colour and dark-blood colour; and at such times there must be enough of those in flower to make a good show. In June the difficulty is to select, for there is a blaze of flower, and all the annuals are rapidly aiding the general bloom. All the colours are plentiful, and if the place were extended to thrice its size, we feel that we could fill it. Nor does the next month find us in any difficulty for subjects in flower. The perennials take the ascendant as to beauty, the Carnation and Picotee forming themselves a most gorgeous and most delicate subject. The Balsams, among the annuals, are now in perfection; the China Aster, and many other subjects, being gay. The Delphinium grandiflora, with its dazzling rich blue flower, towers above the ordinary annuals, and is, for its time, the most striking subject in the place. The Hollyhock plays its part for two months nearly; and before that is done with, the Dahlia begins. And we know of no better way of regulating a garden to be thus supplied, than by cultivating all things in the nursery garden at their proper season, and, when they will bear it, in successive seasons; and as soon as one set of subjects in the show-garden becomes shabby, to

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replace it with another, carefully removing the defunct with a spit of earth to the place where the new subject is to be obtained. If the defunct plant be worth keeping, let it take the place; if it is an annual or biennial, and is useless, let the earth only be placed there and the plants be thrown to the dung-hill.

IMPORTANT TO JUDGES AND EXHIBITORS.

Our readers well know the service that the little volume called "The Properties of Flowers and Plants" rendered to judges, exhibitors, and to floriculture in general; from the day it was published, the most inexperienced knew what to try for, what to continue growing, and what to throw away. A pocket volume of more importance, if possible, is about to appear, called "The Properties of Fruits and Vegetables." Hitherto scarcely two sets of judges agree on what constitutes perfection in those productions. We have not the smallest pecuniary interest in the sale of the volume. Whether it sells to the amount of one thousand or a hundred makes no difference to us, and therefore we honestly and disinterestedly recommend every cultivator of a gooseberry or a cabbage to procure it and study it; for, whether he shows or judges, it will be of immense service. Judgment will be uniform among all who read it, and the thousands of exhibitors, from the gentleman's gardener to the poorest cottager, will know what to select. It will be a shilling well laid out, and it may be ordered of any one who serves the "Midland Florist."

POISON TO BALSAMS.

It is strange that every petal that falls and rests on the leaves or branches of a balsam, acts as a poison if wetted, and the leaf or branch mortifies and falls off, so that those who take any very great pride in the culture of this very beautiful plant ought always to watch the falling of the petals and take especial care that none lodge upon any part of the foliage. If any should lodge at the base of the branches and should get wetted, that branch will turn black at the bottom and fall off; there is danger then that the affection spreads on the main stem, which will very soon rot there and topple over. When those plants are kept in the house, and no wet can reach them from without, great care must be taken to water the soil without allowing a drop to reach the leaves or flowers; but when they are set out of doors and they receive the rains, they must be looked over daily and the petals be removed; and, in fact, as they begin to decay, they are better removed altogether from the pod of seed. But there are many cultivators who care nothing about the seed, and in such case the flowers should be cut off as they fade, for the plant continues to bloom much longer and better than if the pods are allowed to swell. Those who are anxious for large plants must bear in mind that size can only be attained at the expense of the individual blooms, because they must pick off the buds as fast as they come, till the plant is as large as they want it; then let them flower; there will be no scarcity of those, but they will be much smaller and less double, and the seed from them, if saved, will be good-for-nothing, for three parts will bring only single flowers, and perhaps none of them quite double.

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SWEET WILLIAMS.

Among the many questions put to us with regard to the improvement of races, the majority just now relate to Sweet Williams and Mr. Hunt's advances in the quality of its flowers. Some express a little disappointment that they do not, from his seed, all come smooth-edged and with dense colours, that they are not all new in character, and that some are no better than ordinary. Now this is unreasonable. How do we find Pinks, Carnations, Picotees, Geraniums, and other florists' flowers? Nobody can deny that we have brought all these to a high character, and that the best are really approaching the standard of perfection. But, if after taking great pains to save seed, we raise a thousand plants, how many do we find equal to those already named and in general cultivation? We may find hundreds that are good border flowers, but not half-a-dozen worth naming. Yet some people expect the Sweet William to be an exception, although it was the most obstinate of all flowers. Those who wish to go on with Mr. Hunt's improvements will find that a sixpenny packet of seed will produce a majority very beautiful in colour, but not rid of the sawed edge, nor of the speckled surface, but, nevertheless, so fine that they *cannot* muster courage enough to pull them up and throw them away, although if he wished to progress, they ought to be destroyed the instant the first flower opens and shows its faults, otherwise they will contaminate the seed of the best. Among these there may be found two or three stars, smooth-edged, large-flowered, dense solid colours, marks well defined and novel; these should be propagated and the seed from them sowed, and another year they may produce other beauties, varying in colour and marking, and smooth on the edge. But, unless every middling and inferior sort be removed directly it shows itself, the seeds of the very best will be no better than that saved from inferior varieties that have been blooming with them. Nature is always trying to win back all departures from the original plants; and if there be but a solitary old one with all its faults among the best, it may prove enough to damage the greater part of the produce, and there would be very little difference between its own seed and that of the plant which it had fertilized. We could show a large quarter which had been filled with seedlings, several hundred of which we had destroyed, and there are not more than seven or eight left, from which we are seeding. How, then, are we to proceed to bring the Sweet William to a florist's flower? Why when we have any good enough, propagate and name them, layer them like carnations, or pipe them like pinks, you will see by next season whether they retain their character, and if they do continue the same, let all the world have it at a price; but it may be worth while to keep it in two seasons to propagate it to a greater extent. All we desire to impress on the mind of the grower is, that he must treat the Sweet William as he would a pink, and expect no more of it than he does of the pink. He may reasonably anticipate from the seed of florist's Sweet Williams, two or three stars, perhaps more, worth naming and growing in collection; a few more nice smooth-edged and finely-marked flowers, good enough for borders, but not sufficiently remarkable to be named, and the great majority run back to sawed-edges which should be

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destroyed the instant they are detected; and too many have not the courage to do this, because notwithstanding their serrated margins they are very showy, and the grower will perhaps think they are "too good to throw away;" it is proper, however, they should know by leaving a single plant with a serrated edge, they go back a whole season in the value of the seed they save. We have letters complaining that the writers have not a dozen smooth-edged flowers in a hundred plants. Why there is a Dahlia grower who boasts that the flowers he sends out are selected from six thousand seedlings, and there is rarely two good ones among them; and we have ourselves examined for the growers, beds of various seedling flowers, and a man thinks himself well off if he has half-a-dozen worth keeping, and only some of them worth naming. The Sweet William will be a florist's flower, but those who wont cut the serrated edges the instant they can be detected, and those only, will succeed in producing things worthy of a name, and of a general propagation; they should now be layered or piped, in precisely the same way as pinks and carnations.

The Dahlia is the principal ornament of the gardens at this time, and florists are all upon the *qui vive* to produce flowers fitted for the exhibitions. If great attention has been continuously paid to the destruction of vermin, the work for the future will have been greatly lessened; but if they have been neglected, the attention now required will be great indeed. Shading must be resorted to, and covering in such way as to keep out vermin, though it is always far better to destroy them altogether at an earlier period. One of the most common, and perhaps effective, methods of shading and protecting, is to have a board large enough to hold a thirty-two-sized pot wrong-side upward; this board has holes at the corner, so that pointed sticks stuck in the ground, and the points through the holes at the corner, form legs to make this a sort of table. A slit is cut in this board, from the side to the centre, wide enough to pass the stem of a Dahlia, so that the bud is brought to the middle. The slit is then stuffed with cotton, so as to prevent earwigs passing through, and a pot inverted is covered over the bloom, which, when covered, is perfectly free from attacks of vermin, a cork being placed in the hole of the bottom. We do not think the blooms are half so good when thus closed up, but it is a choice of evils. Some persons have glass covers, and shade them with cabbage-leaves, or some such material. The instant you see a bloom will not do, take it off, for it is better away than distressing the plant. Whenever a bloom is likely to do, take off the buds in the immediate neighbourhood on the same branch.

The Phloxes.—Few plants afford a much greater diversity than the numerous varieties of the Phlox: very tall, very dwarf, very large, very small, with all the grades between them, may be found in a moderate collection, and we shall not be surprised to see trusses of its bloom exhibited shortly like those of the Verbena and Petunia. We hardly know a flower more calculated to sport when once people begin raising them from seed in anything like quantities. No plants have been more neglected than a large class of border Perennials. They propagate them-

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selves, and people hardly dream of securing seed, or waiting for plants raised from seed; otherwise the Lychnises, Delphiniums, Lupines, and many others, offer the highest temptation to the florist. The Phloxes, however, stand pre-eminent for their claims upon the florist. They are already beautiful—many of them are worthy of the best place in the garden—and a diversity of colours would increase the interest of the family amazingly. Van Houtte has sent us over a Phlox sufficiently variegated to show that there is an inclination to sport; all we have to do is to persevere in the course which has been successful with other flowers, taking care that seed is saved only from the best varieties, and then again selecting the best from them, to go on breeding from. The Phlox family propagates itself, like many other perennials, by spreading its roots, and the shoots from them, until, if left alone, a small plant will, in time, make a great patch that would cut out into a large number of rooted offsets, so that when you have a seedling that you think it desirable to propagate, all you have to do is to carefully take off all side-shoots from the root as soon as they are large enough to handle, and plant them out, six inches apart, in a good rich bed; or you may put them in pots, and keep them in frames. The Phloxes are sufficiently hardy to stand out all ordinary winters, and there is scarcely any one of the herbaceous perennials that can reward us better for any attempts we may make to improve the races.

Bass for tying Plants.—The Bass, or material of which the garden mats are formed, is commonly used for all the lighter tying which is necessary in gardens. This Bass is the inner layers of the bark of the lime-tree. The bark of lime-trees grown in this country is nearly or quite equal to the Russian. To obtain it, the timber, after being cut, must be laid up for twelve months in a dry place, and the bark may then be stripped off; the inner layers being suitable for fine tying, the outer layers are coarser, and serve for strong rough tying. During 1846, attention was directed to another kind of Bass, called Cuba Bass, from being commonly sent around packages of cigars which come from thence. This is now introduced for gardening purposes; it is full of long narrow meshes, or openings, somewhat resembling lace, and is brought over in long ribbon-like strips; it is rather stubborn in texture, but very strong, and splitting readily into narrow portions, thus being suitable either for strong or light ties. It is not known by what tree it is produced. Another material of this kind is found in Madagascar, where it is used by the natives in making ropes, in which state it has sometimes reached England. It is said to be the produce of a "grass-tree," and has the appearance of being the long narrow foliage of some such plant; but what plant it is which produces it is as yet unknown. This occurs in long strips, much narrower, apparently, than the Cuba Bass; it is very soft and fine, and remarkably tough, it being difficult to break even a very thin piece of it; it splits readily into fine strands, and will, therefore, be exceedingly well adapted for all fine tying, being light and fine, as well as strong, and in thicker pieces, or two or three together, will make a strong coarse tie. A supply of it is likely to be obtained for garden purposes. It is by far the best material of the kind that has yet been brought into notice.

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WHAT FLORISTS SHOULD DO.

THE readers of the MIDLAND FLORIST should consider themselves a very important community, who are looked up to as genuine promoters of pure floriculture; and as such lose no opportunity of serving the cause. There are many occasions on which their influence might be useful, and all our hope is that they will not, in the apathy which now and then steals over us, fancy that "what is everybody's business is nobody's," and fail to do their best when their interference would be beneficial.

Among the chances of doing good by preventing harm, there are some which they should never neglect to take advantage of. For instance, in the drawing up of schedules for exhibitions, the managers are too often exhibitors, and they shape the prizes to their own stocks, and those of their friends. It is the duty of the true florist to see that this be not carried out to an injurious extent, but that the prizes be accorded so that they are open to the largest number of competitors. As an example of the contrary, a committee-man in a provincial society stuck out hard for a good prize to be offered for Gladiolii, and there were not half-a-dozen people for miles round who grew them. We do not say that the idea of encouraging a young favourite flower should have been repudiated, but those present ought to have seen that the prize was almost *nominal* instead of being *liberal*. Perhaps if they had known that the mover had procured a collection of the finest varieties, and was sure of the prize the first year, they might have made a stand against the movement. This one case is as good as a score to explain one of the evils which florists should endeavour to counteract. Whether it is right for exhibitors to have any thing to do with schedules, or the management of shows, is a question we will not go into, but our opinion is, that if it be allowed, the meeting for drawing up schedules should be open to all the members, and not be the work of a committee, in which one or two leading members settle all matters. They say that "in the multitude of council there is wisdom;" now if the meeting for the arrangement of the schedule were attended by all the members, there would be something like a security for a plan that would suit the greater number. Upon another subject, the florist, whether amateur or professional, should use his influence in procuring a sound judgment in the awards of the prizes, for on that much depends; generally speaking, there are valid objections to nurserymen acting as judges; they are never proposed except by some one whom they serve with flowers or plants, and they are placed in this difficulty: if they do not take care of their customer they offend him, and if they give him the benefit of a *doubt* —which to the impartial observer is, perhaps, *not a doubt*—the rest are dissatisfied. We once acted as judge with a great nurseryman for our companion, and we had the greatest difficulty in preventing him from giving the first prize to the worst collection of plants. For they contained two or three novelties, mere scrubs, but still *new*; he stuck to them as if he were struggling for his life, and we were determined to give in our award alone and let him give in his; for we saw no chance of agreeing. However, he gave way, and we afterwards learned from the secretary

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that the losing man was the nurseryman's best customer, and the judge was appointed through that customer's influence. This, like the former case, is as well for our purpose of example as a hundred. A third point of great consequence, which the promoters of floriculture ought to look to, is, to oppose large prizes, and few of them, and insist upon a great number and of less amount; for it would deter those who make a living out of shows by regular combinations to attend and sweep off large ones wherever they are offered. The true florist may be anxious as to his rank in the award, but the money value is a secondary consideration; and the managers may rest assured that the more prizes there are in a class, the more exhibitors it will draw; while two or three large awards in a class prevent scores from attempting to compete, because they know beforehand there is no hope. Lastly, florists should insist that the judges shall be guided by the PROPERTIES OF FLOWERS AND PLANTS, because the exhibitors then know what to show for, and the judges have a guide. We are anxious that the thousands of readers who use the MIDLAND FLORIST for their text-book, and who can at any time communicate their thoughts through its pages, should bear in mind that it is the only anchor of the floral world, and that they should promote its welfare as it does theirs. Every new reader they procure is of service; but when it is considered that those who were trusted with its publication deceived *hundreds* of readers by saying it had stopped, while they had it under their *counter*, great service can be done by undeceiving those who were told it was not coming out.

We never could understand why the MIDLAND FLORIST was attacked in that underhand way; but there could be only one motive—that of ruining the work by reporting it dead! and thereby deceiving all the dealers and readers into giving up all hope of seeing it again. When we complained to Messrs. Low about the injurious report, they pretended that it originated with Kent's house, and they put it on one of the collectors; but we have the evidence of a city bookseller of some standing that they reported it at the office "not out," while they had all the numbers in the house. We mention this to show that we require all the readers can do in the way of enlightening those who were put in the dark, and who consequently, do not know that the work is as sound as ever, and never stopped —nor was it ever in 1861 an hour late in the market. But we are sorry to say that the same kind of bare-faced influence has made many communications useless from delays, and we fear caused many others to go altogether astray. We trust, however, allowance will be made for these mishaps, and that our readers will make common cause with us to spread wholesome floriculture all over the kingdom.

ROSES.

I THANK you for the article on building. I have followed the advice and find it to answer. The roses have taken well and are growing fast. I quite concur with your observations on rose showing in the July number.

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There are not many roses that are worth growing. I append a list of really good and growable roses on each family, such as I have proven. I multiply only such as are good, and good doers; and hence I have always my two gardens full of roses.

Provence.—The White Provence.

Hybrid Provence.—Blanchfleur, Comtesse de Segur, Clementine.

Moss Roses.—Gloire de Mousseuses, Lanei, Common Moss, White Bath. This one is hardy, a free grower, and an abundant bloomer on Manette.

French Roses.—Adele Prevost, Cynthia, D. Aquesseau, Letitia, Ohl, Kean, Napoleon, Schrismaker, Trauson, Garbault, Triomphe de Jaussens, Bonla de Nanteuil.

Hybrid China.—Brennus, Madeline, General Jacqueminot.

Good Pole Roses.—M. Planteor, Triomphe de Bayeaux, Chenedòle.

Hybrid Bourbons.—C. Duval, C. Lawson, Coupe el Hebe, Paul Perras, Paul Ricaut.

A good Pole Rose.—Frederick the Second.

Alba Roses.—Felecitè Parmentier, M. Audot, La Seduisante, Queen of Denmark, Sophie Marcilly.

Damask Roses.—La Ville de Bruxelles, M. Zoufmann, the best white.

Austrian Roses.—Hamsoni, Persian Yellow, both good for decorative purposes.

Autumnal Roses.

Moss Roses.—M. Ory is the only good show flower. Salet is a good bloomer, but not a show rose.

Damask Plants.—Mogador.

Hybrid Plants.—Duchesse d'Orleans, a grand rose; Alexandrine Buchmeteff, Anna Alexceff, Anna de Diesbach; these two are fine, but rather loose. Baronne Hallez, Baronne Prevost, Sir John Franklin, Patrizzi, C. de Sausal, Comte de Nantwich, Chabrillan, Duchess of Norfolk, fine but not always shaped well; Maroe, Arego, Geant des Bateulles, General Jacqueminot, not full, but fine; Jules Margottin, Eugene Appert, La Ville de St Denis, Le Lion des Combats, fine colour; Lord Palmerston, Victor Verdier, Cambaceses, M. Knorr, M. Place, M. Phelep, La Fontaine, M. Vidot, tender; Maria Portemer, Marie Thièry, M. Reignier, Monsieur Ravel, Paul Duprey, Prince Leon, both first-rate, but not very good growers, P. Noir, fine colour and petal, but not full, Pius the 9th, Angleterre, Leveson Gower, Duchess of Sutherland, Triomphe de l'Exposition, Triomphe de Paris, Lord Raglan, W. Griffiths, and Pauline Lansezeur. These are a good lot of roses, and the pick of the older roses. The following novelties are first-rate in all respects:—Senateur Vaisse, Gloire de Santenay, Belle de Bourg la Reine, L'Elegante, Alexandrine de Belfroy, M. Bonnaire, M. Louise Cœrique. Buffon and Parmentier are good and of excellent habit. Louis the 14th is a good flower, but the wood is limp. I have not yet bloomed Duc de Cazes, but it was beautiful at the National.

Bourbons.—Acedælie, Souvenir de la Malmaison, one of the finest of the Blush roses, Diepetit Thouars, Leprestre du Quentinee; the three last

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are first-rate, but too dwarf; Paul Joseph, a strong flower on its roots, Proserpine, ditto, Henri Lecocq, Souchet, G. Peabody, Louise Odier, Georges Dupont, one of the best, good form and fixed colour.

Good Pole Roses.—Paxton, Apolline, Acidalie.

China Roses.—Mrs. Bosanquet.

Tea Roses.—La Boule d'Or, Adam, Comte de Paris, D'Evonienses, Gloire de Dijon, M. Maurin, Sombreuil, M. Bravy, S. d'Un Anie. These are first-rate. Bougèro and Safrano are fine as opening buds; and Gonbault is fine for its peculiar scent.

Norsette Roses.—Solfaterne, Triomphe de Rennes, Anstide, are three good yellow roses, and excellent wall roses. Celine Ferestier is also blooming beautiful roses, but I have had but little experience of it. I have three on Manette stocks. A wall is its place. The tea Gloire de Dijon is an admirable wall rose. I have ten of the above yellows in front of my house.

If your readers choose from this lot, subject to the remarks I have made, they cannot be hurt. They are the eclectics of England, and good doers. Many are on Manette, and many on the briar, or both stocks, or their own roots. M. Laffay, Paul Joseph, Proserpine, General Jacqueminot, Geart des Bafeulles and the teas will all do well on their own roots. The first will not bloom on a briar, but is an abundant bloomer on Manette.

The following roses on Manette will make autumnal pole roses:—Bachmeleff, B. Prevost, C. de Sausal, Sutherland, La Ville de St. Denis, Norfolk, Mount Carmel, Cambaceses, Jules Margottin, Angleterre, Gloire de Dijon, Octavie Fontaine, a small but neat white Bourbon. Be it, however, observed, that a pole rose should be short-jointed, and should cover its stems with leaves and flowers; and none of these will do that. La Ville de St. Denis will dō it best; but the best of all is General Jacqueminot on his own roots. A four-years old tree here flowers from the base to the top. The best type of a pole rose is M. Plantier, and the best to cover its stems on a wall is Ophine.

I will now make a few observations on good roses, but such as cannot be depended upon. Paul's Victora does well on Manette; Louise Perronny is fine, but they were all killed by the winter; the Duke of Cambridge and Eveque de Nismes will only do well in strong ground; Auguste Mie and M. Rivers are season roses or good doers according to weather; Adelaide Fontaine is the same; Pœonia and Oriflaume de St. Louis are blazers, but not well formed; Col. de Rougemont is a finer flower than B. Prevost, but not so good in habit, and the foliage is curled; Leelia is like but hardier than Perronny. Finally, accumulate good roses, instead of buying units of trash. I have from twelve to fourteen hundred of the above roses, and my garden is, and will be, full of flowers till frost and snow set in. My chief dependence is on the Manette stock, which, when budded low and properly planted, is the best rose stock for abundant, quick, and continual blooming in the world. I am ready to prove this, at all times, by my two rose gardens.

Rushton Rectory, Blandford, Dorset. W. F. RADCLIFFE.

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SOUTH METROPOLITAN AMATEUR TULIP SOCIETY.

THE Second Annual Show of this young but rising society was held at "The Union" Tavern, Camberwell New Road. The stands exhibited were not only numerous but highly meritorious, and proved the genuine interest taken in the cultivation of this beautiful flower by the society's members, a large proportion of whom are new to the fancy. The occasion was rendered the more interesting by Mr. Quelch exhibiting one of his new Bybloemen seedlings—a first-class flower—the ceremony of christening which, with the name of "Mrs. Quelch," was one of the events of the day's proceedings. The censors were Messrs. J. T. Neville, Howard, and S. Gogay, and the prizes were awarded as follows:—

CLASS A.—TWELVES.

1st. Mr. Weare.—Aston's King, Sheet Anchor, General Barneveldt, Fluter's Earl of Warwick, Rose Emily, Goldham's Duke Richmond, Rutley's Queen, Aali Pacha, Hamlet, Nora Creina, Aglaia, Mr. F. Perkins.

2nd. Mr. Quelch.—Sphynx, Gibbons' Catherine, Duchess Sutherland, Marcellus, Aglaia, John Delaforce, Slater's Colbert, Batten's Queen, Hero of Renfrewshire, Polyphemus, Mrs. Weare, Page's Charlotte.

The competition between these two stands was of the closest nature, and it was only after the most minute analysis of the several points of excellence that the first place was awarded to Mr. Weare.

The 3rd prize was taken by Mr. Morgan with Cremorne, Celestia, Cato, Surpasse Cat, Rosa Primo, Lord Byron, Groom's Duchess Sutherland, La Tendresse, Rubens, Nora Creina, Empress and Gibbons's Bertram.

CLASS B.—NINES.

In this class some remarkably beautiful flowers were shown, and the first prize was awarded to Mr. Chappell for Lord Denman, Lord Byron, Pilot, Ivanhoe, Vivid, Aglaia, Rose Brilliant, Brillante Eccletante, and Cato; the second being gained by Mr. Bellamy for Ellen Tree, Triomphe Royale, Lord Hill, General Barneveldt, Lord Byron, Franklin's Harret, Delaforce's King, Albion, and Cato.

CLASS C.—SIXES.

Nine stands were exhibited in this Class, and the first prize was most deservedly awarded to a maiden Grower, Mr. W. Sparrow, for Acapulca, Cato, Lord Brougham, Page's Charlotte, Groom's Claud, and Mountain Sylph.

2nd.—Dr. Scarnell for May's Prince Albert, Alcon, Wallace, Norman's Earl of Derby, Seedling, and Waterson's Catherine.

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3rd.—Mr. Quelch, jun., Lawrence's Patty, Gibbon's Catherine, Bizard (unknown), Franklin's Earl Grey, Aglaia, and William Pitt.

A fine stand of Mr. William Ball's Flowers was disqualified by a seventh petal in an otherwise beautiful Triomphe Royale.

Three extra Prizes were also competed for: One given by Mr. Quelch for Sixes among Growers who had never taken a Prize before, and for which Mr. W. Sparrow was again placed first, Mr. Pullen second, and Mr. Duck third.

Another, given by Mr. Weare for Sixes, open to all Members, was warmly contested, Mr. Chappell obtaining the first place, Mr. Mousley the second, and Mr. Tolley the third.

The other given by Mr. Chappell among maiden Growers was awarded to the only exhibitor in the class, Mr. Quelch, jun., who exhibited a most superb stand of six blooms to obtain it.

In a special Class for Tri-colours, Mr. Weare carried off the only prize, whilst Mr. Quelch was successful in winning the prize for Premier Blooms, for which, also, a special Class had been formed.

Several stands not for competition were likewise exhibited; conspicuous among them, a dozen magnificent flowers grown and sent by Mr. Phillips of Hayes, Middlesex; and altogether the show was one of the *most satisfactory* and promising character.

BROOME ON LONDON GARDENING.

Our indefatigable London gardener, Mr. Broome, of the Temple Gardens, has just launched a fifth edition of his "Treatise on the Culture of the Chrysanthemum," and has added some useful lessons on town culture. It is worth something for a young beginner to know what subjects will grow and what will not, for he can at once plunge into the smoke with only such things as will grow in smoke, and come off victoriously the first season. The men who have the care of the squares in and about London, and indeed other smoky towns, would do well to read this book attentively. So far as London is concerned, the majority of the squares are badly planted and worse kept; but the secret of this is that there is not sufficient funds allowed to keep them commonly decent. One half want a regular clearance of the consumptive half leafless trees and shrubs, a thorough good draining, trenching two spits deep, and a fresh lay out with appropriate subjects to grow; and here friend Broome's book will assist the planter, for without experimentalising upon shrubs and trees that may fail, he can see at once what will best answer his purpose.

With regard to the habits of the Chrysanthemum, Mr. Broome has always been a close observer; and if the book contained nothing but his classified catalogue, it would be worth all the money, for the trade catalogues are very deficient in that particular, and a young grower, or rather one who wanted to become a grower, would be totally unable to choose the best, because he would have no guide. Mr. Broome describes height, size, colour, and habit, of all the sorts worth growing. We should have

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liked the book quite as well if the author had omitted the lesson on disguising flowers, and he might have found a respectable cultivator to give a few hints on the production of large specimens of cut blooms; but it is the excellence of the other portions of the treatise that makes any little blemish so conspicuous. The following remarks about the disposition of the Chrysanthemum to sport are the only ones of which we shall rob the book:—

"There is one thing I have omitted to state, which is of great importance, namely—to be very particular in choosing the strain of his plants. Some will sport very much, and often produce new varieties, some will come very good and double, while others from the same plant will come with a seedy eye. When you find this throw them away, and keep the best strain, and do not lose it if possible. Some persons do not believe in this, but I have proved it to be correct. Try it, and you will be sure to agree with me. If you see a different colour come on the same plant, take it off immediately, and strike the cutting from the stem, not the root, as that is of no use. Alfred Salter and Golden Queen are sports from Queen; Golden Trilly from Trilly; Golden Hermione, from Hermione; Delight, from Formosum; Golden Cedo Nulli, from Cedo Nulli; and a great number of others, therefore look sharply after them when in bloom, you may get a sport. With respect to the seedlings of them, Mr. Ingram, the Queen's gardener at Frogmore, has reared some beautiful varieties from seed raised by himself. They require to be kept dry through the winter till the end of February, before taking off the bloom; and if the dead petals of the flowers are trimmed off close, it will prevent the root hanging about, and damping off the seed-bud before it is ripe; the less petal there is in the bloom-bud, the greater chance there is of getting seed, but they must be kept perfectly dry."

Every edition has been an improvement on its predecessor, and now that the London Gardening in general is taken up, Mr. Broome will have left the fraternity of City scribblers nothing to write about, and, what is still worse, turned us all out of the Squares and Bespoke Conservatories for them, no doubt, to make a new subject for his next edition.

CROSS BREEDING.

Flowers have, for the most part, a portion connected with the seed-vessels which would be perfectly useless, unless there were anthers, which hold the pollen, or powder, to communicate with it, and thus fertilize the seeds, which would otherwise be useless and barren, even if they grew at all. This portion, which is attached to the seed-vessel, becomes at a particular period of its growth sticky, and the powder, which escapes from the anthers, is retained by the glutinous portion, and every grain of powder forms a complete seed in itself, striking down an imperceptibly fine fibre, or root, into the vessel, and by the communication with the seed within renders it vital. Now the sporting of flowers forms one of the great charms of the florist's occupation. Many flowers sport of themselves; a pinch of seed from a yellow flower, or a red flower, bringing those of half-

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a dozen different shades, and of various properties. Whether this is the result of cross impregnation by the bees and flies that carry the powder on their limbs from flower to flower, is a problem; but it is quite certain that if the seed-vessel of one flower be fertilized by the powder from a different flower, there will be a modification of form and colour, and of a number produced from such crossing some will be like each parent, and some between the two. By this means the good properties which are separate in two flowers will sometimes be combined in one, and the raisers of seedlings should endeavour to anticipate the uncertain and often unsatisfactory work of bees and flies by performing the necessary office themselves. The cases in which such impregnation is desirable are:—

First, when a flower has one or more good properties, but in some respects is faulty.

Second, when a plant that is hardy is greatly inferior in other respects to plants that are tender.

In the first case, we will suppose that we have a finely-coloured hollyhock with petals flimsy and bad, and that we have a very thick-petalled hollyhock whose colour is nothing new nor very good; cross impregnation here may produce, among a hundred other varieties, some one or more with the good colour and the thick petals—the very *thing* we want.

In the second case, we will look to Rhododendron ponticum, or maximum, or catawbiense, all of which are perfectly hardy, but none of which have the magnificent colour of the more tender varieties; by crossing the hardy ones with the pollen of the tender ones, we may obtain the superb colour on the hardy plant,—the thing of all others to be wished. In this way we have possessed ourselves of the beautiful variety called Alta-Clerense, and many others very rich and very beautiful.

Mr. Smith of Norbiton succeeded in a remarkable manner in producing a cross between the splendid Azalea sinensis, bright yellow, and the common Rhododendron, and the result was yellow Rhododendrons, of which there are now many different shades, from sulphur to deep crocus yellow, and some of various shades of bronze: this may be called the triumph of cross breeding. In this way many very superb varieties of Azalea, Amaryllis, and other plants, have been produced, and new families almost created. The theory of cross breeding is this: the principal organ attached to the seed-vessel, called the pistil, becomes glutinous when ready to receive the powder; and unless we are very quick, the anthers of the flower burst at the same time, and enough of the powder will attach itself to impregnate all the seed; therefore we ought, as soon as the flower opens, to pull or cut away all the anthers; this at once prevents self-impregnation, and we have only to watch for the time when the pistil is ready to receive the powder, and then take some from the flower whose habit we wish to impart to the one we operate on. In various flowers the mode of operation differs according to circumstances; in some it is exceedingly difficult to get at the organs of germination. The pansy can only be fertilized by taking the powder of one flower on a camel-hair pencil and rubbing it into the centre of another flower. The dahlia has the principles of fertilization in every petal, and sports so much without any trouble, that we never attempt it by hand. The rose requires to be

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opened by gentle violence before it opens of itself; and many flowers require considerable delicacy in the operation, to prevent failure on one side and injury on the other. The French people profess to do a good deal in this way with roses; but, for the most part, the best way to produce novelties is to place together all the varieties that are good for anything, and save all the seed, without seeing how they become crossed. Nature is no bad workwoman, and when left to herself will often do what none of us dream of. Those who are fortunate enough to get a new variety see what it is most like, and pretend that they have produced it by a cross of their own;—no matter, we have them, and care very little how they came.

THE PROPERTIES OF THE IRIS.

THE lover of flowers could with a little consideration tell us, instead of leaving us to tell him, why he preferred one variety of any kind of plant to another, but scarcely any one will give himself time to inquire or consider, and rests satisfied with the simple fact that he does prefer it. Therefore it is that in many of the most common things we have been obliged to lay down rules and explain principles upon which the merits of a subject may be tested.

The growers of the iris know that the Spanish and Persian varieties are not so rich as the English kind adopted by florists. Why is this? Simply because the principal petals of the latter are broader. If these broad petals are richer than narrow ones, a point is gained by broad petals. Bright or dense colours are preferred to dull watery undefined shades. Thick petals stand longer and hold their form better than thin ones. Smooth edges look better than rough or notched ones; and so we get at certain beauties, which a flower must possess to be perfect.

This explains the principles on which the properties of the iris are founded, which, as there is some difference of opinion, we quote:—

"The three principal petals should be broad enough to touch one another; the three secondary ones should stand distinct and apart from the principal ones, and be also broad enough to touch one another.

"The three principal petals should be thick, smooth at the edges, broad and blunt on the outer extremity, and curve gracefully from the base outwards and downwards in the form of the top half of a hollow globe.

"The colour of all six petals should be dense, be it what it may; pale or dark blue, purple, lilac, or blush, no matter which; and the markings should be distinct and uniform, the three principal petals alike, and the other three alike, but not both threes of the same colour.

"The texture should be velvety over the surface of the three principal petals, and the edges should be crimped or frilled, but not serrated. The surface of the others should be smooth, like wax or enamel.

"The stems should be strong, and the flowers thrown up well out of

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the sheath, and bloom one at a time; that is, the second should not open until the first is on the decline."

All the floral world, from those who like the least to those who like the most interesting, would on seeing a flower that nearly approached the standard, by the side of one that did not, instantly decide in favour of the former, even if they could not tell us the reason why. The fact is that the more surface of petal there is in a given space, the more brilliant a flower appears; and every vacancy or break looks worse than if the deficiency were filled up. This answers "a Nottingham friend," and "his anxious neighbours."

STOP THE POTATO DISEASE.

How many times have we cautioned our readers about the potato disease, and told them how to save the crop? How often have we repeated the opinion we gave as to the cause, on its first frightful visitation? Yet we must once more publish both the opinion and the advice, for we are *told* by panic-mongers that the malady has appeared in many places, the cry will be taken up by all who are interested in a rise of the price, and there are newspapers always ready for a consideration to further such people's views.

Many years ago while every writer was blundering over the *effects* and fancied they were the *cause*, we stated that it was atmospheric (electric), that if when the haulm was attacked it was immediately cut down, the potatoes would be safe and sound, although it stopped them from growing. We also stated that if lime could be applied to the affected part, it would stop the disease from spreading. Having proved both these remedies, we could speak and write with confidence. One professor would insist that the *cause* was a fungus; another, that it was an insect; a third that it was canker; others, mildew, *Aphis vastata*, putrefaction, gangrene, &c. Not one of them had the brains to discover that all these were *effects*, and not one touched the *cause*, which was, as we have always affirmed, decomposition by electricity, which, if not burned off with lime, or cut off altogether, would spread through the system and reach the tubers. The lime, we knew, was effective where it reached, because we repeatedly tried it on individual plants, but for a crop impracticable; because it could not reach all the parts affected, and might as well reach none; but cutting down the haulm, which could be done to any extent in a day, was a prompt and certain remedy. The *Gardener's Chronicle*, which has had of late years several correspondents who have fallen in with our views, but, of course, gave us no credit for them, has quoted the following bit from a country paper:—

"Mr. Superintendent Jeff has, at North Patherton, some rows of potatoes, in the haulm of one of which he recently discovered signs of disease, adopting a mode which has found favour with many persons in the same predicament, he cut off the leaves close to the ground in order to prevent the disease from spreading to the potatoes. Afterward he scattered

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some slaked lime, in a warm state, over the row, and he found that it formed a kind of cement over the stalks which had been cut, and prevented the sap from exuding."

All this amounts to nothing more than we have been recommending many years, and has been successfully practised, by a great number of growers, in all parts of the country. As to the lime, it is perfectly useless, because if the haulm be cut down before the putrefaction, caused by decomposition, has time to descend, the crop is safe, and if it have already descended below the cut, nothing can prevent its spreading to the tubers.

People may fancy that our theory is not correct, because sound potatoes have been attacked by the disease after they have been stored; a great mistake this: the potatoes, though sound in appearance, had taken poison, which is sure to end in putrefaction. When potatoes are found, some rotten, and some that appear sound, on the same root, rely on it, however sound they may seem, that they are not to be trusted a week.

Every time the attempt has been made to create a potato panic we have repeated our advice, and we wish to remind those who are easily frightened, that the few who publish these miserable complaints can stop it if they like, but that they form an insignificant fraction of growers, compared with the million whose crops are sound and good. In the panic year, when potatoes were held up till they were £8 or £9 per ton, one man who had a thousand tons over stood his market, and the whole went at £3 per ton, to a pig feeder. If the potato factors attempt to get up the price, our advice will be to abstain, as much as possible, and rely on bread. Let those who now have four pounds do with two, and make up with other vegetables. Monopolists will soon find that the public have a remedy against extortion in their own hands. GEORGE GLENNY.

THE GARDENIA, OR CAPE JASMINE.

THIS first favourite at the markets, as well as gardens, is now cultivated to a great extent for cut flowers, as well as to be purchased as plants. It is one of the most delicate in appearance and most fragrant flowers of the early part of the year, for it is forced forward with alacrity to meet the demands for the first flowers of the spring, and is the most beautiful of all the small flowers produced. The gardenia strikes freely from cutting, placed in sand and under a bell-glass, favoured by a little bottom heats and as soon as the cuttings are struck, they are planted out in pots, one in each pot, and transferred to a common hot-bed, plunged in the mould to the rim of the pot, and kept growing sharply until they actually flower; but if buds should come while the plants are very small, you may choose which you will sacrifice, the growth of the plant or the flower: sometimes a cut flower will bring more than the plant would if grown up to the market size, and there is no flower in general so popular, come at what time of the year it may. The grand thing to recollect in its cultivation is, that it rejoices in moist peat, and in nothing so much as a common hot-bed; a few pots in a cucumber frame are sure to do well, and those

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who grow for market find the common hot-bed the most profitable as well as the most efficacious, as for the time the heat is just what the plant requires, and keeps off red spider, mealy bug, and all the other entomological plagues that so readily attack the plant in our ordinary stove. When the plants get large, they should be grown in the orchideous house, which is always moist, otherwise it receives a check which it rarely recovers without a good deal of care, and sometimes not at all. Cuttings taken off at a time when the last year's shoots have made all their growth will strike and bloom before they are three inches high, and in the thumb pots, but it does not follow that they should be allowed to do so if you wish them to be grown up into specimens. There is nothing surpasses the gardenia in fragrance, and very few plants equal it in beauty.

A FATHER'S ACCOUNT OF HIS SON—A FLORIST.

NEVER was advice given more earnestly, nor was it ever more needed, than when I entreated my boy to purchase nothing until he had *the cost* of it in his hand, that he might see and feel it ere he expended *it*; for I felt, and thousands of others have had experience to confirm it, that credit is the creator of extravagance, and that the very best of us incur expenses, with open accounts, that we should never think of incurring had we the money first in our hands to look at. We think nothing of buying a flower or a plant that takes our fancy when we have only to order it to be sent home, and see our bill once a year. Credit is the same in all things. Who is it that is extravagant in dress? Not the man that takes his three or four guineas out of his pocket to pay for his coat—but he who has only to write for his tailor, who troubles him but once a year. A tradesman who finds his Christmas bills comes tumbling in one after another grumbles heartily, and is astonished they should be so high, vows he will be more cautious next year—resolves, perhaps, that he will pay as he goes on—makes the most convenient settlement he can—and before his vows and resolutions are cold gives new orders and goes on the same as before; with this difference, that he is cautious with his first orders, bold with his second—forgets all his determinations—and is extravagant with his third. In short, no man who has the temptation of great facilities for credit is so cautious as he who determines never to wear a thing until it is paid for, and never to buy a thing until he can look at his money and the article he wants at the same moment. I have known a poor weaver at Bethnal Green to buy a five-pound tulip, to pay for it by weekly instalments of five shillings, to be taken from wages hardly enough to keep him decently. If that man could not have bought upon credit he would not have bought at all, because he never got five shillings a head of his wants; but the facilities afforded him for indulging in his fancy, without first getting the money, was his ruin; that is, if it be ruin to be always in want, always in difficulty, always in debt. When we have the money in one hand, and the article we desire in the other, are we in a condition fairly to balance one against the other; but when the article we want is

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before us, and we have not the money to pay for it, we are not in a condition to estimate the one against the other. Possession of the one is offered to us, and we wish for it; we think we shall have the money long before pay-day comes. It is nothing to talk of, and we can be gratified six months sooner by taking credit; very little persuasion on the part of the seller settles the business. We possess ourselves of the object we require, or rather fancy we require, and if we waited until the pay-day before we possessed it, and had the money in hand, the money would tempt us to abstain. If, therefore, it were the last words I had to utter, and wished to leave the most valuable advice that youth, all beyond youth upwards, could act upon, it would be, "buy nothing until you have the money in your hand to pay for it, that you may fairly estimate which will be of the most service to you." This advice I gave to a son, but his ardour was too much for his prudence, and, as will be seen by the striking instances of folly and obstinacy, he was perpetually in some scrape or other. I have always been an amateur florist, but my ambition was not of the highest order. My pinks and auriculas were my pride to show at the "Britannia," or the "Greyhound," a sort of annual excuse for a feast; and if I won a fourth-rate prize, I felt there was no greater man in existence, except the winners of the first, second, and third; nay, I sometimes would not admit that they had fairly won. I have often noticed that theirs had more faults than mine, but I never examined whether mine had more than the one beneath me. I took my youth to a show at the "Britannia," which was then a country public-house, overlooking the Shepherd and Shepherdess Fields, by the City-road; on that occasion I got a prize, amounting in value, perhaps, to half my day's expenses. This pleased me, and the boy saw it; it roused the youth's ambition, and he chatted with some of the most cunning of the floricultural foxes present, among the rest with old Gabel, next to whom he sat all the dinner-time—and an hour afterwards they were in earnest conversation. This was an Auricula Show; the flowers were brought on the table, and the discussion upon their merits was interesting enough. Gabel had got bills printed about his Tulip Show, which was to open in the middle of the next month "admittance, one shilling," but he gave my boy a general invitation, which I thought rather kind than otherwise. For some days all the young scamp's thoughts and conversation was upon flowers. Gabel had made a florist of him, and there was no getting a word in edgeways about anything but flowers. I found he had been several times to see his tutor, and that in three weeks from the time he had visited the "Britannia," he could talk as glibly about bybloemens, roses, and bizarres, as half the old florists. I made up my mind that flowers were a very innocent fancy, and, far from discouraging it, I gave him five shillings per week to spend in them, apart from his regular allowance of pocket-money, with the injunction I have spoken of, that he should save it up till it was enough to buy anything he wanted. The tulip-blooming season arrived, and the instant business was over, the evening was spent at some place or other where there were flowers, and I occasionally went with the young aspirant to floral honours. To my astonishment he pointed out, in different persons' beds, many tulips of which I knew but little; and he gave early promise of advancement. After tulip bloom was over, friend Gabel used

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to be calling oftener than I liked, and I found the youth suddenly thoughtful and dull; whenever flowers were mentioned he endeavoured to turn the conversation. This I wished to fathom, and resolved to see Mr. Gabel upon the subject of his visits, when I found he had inveigled the boy into the purchase of a bed at the price of twenty pounds, and was looking for his money. Of course I told him my mind upon the subject, and insisted upon knowing how much he had paid towards it. This brought out the fact that he had received a pound when the boy bought them, and fifteen shillings at three payments since; he had delivered the tulips at taking-up time. I observed, that except not attending to my advice as to abstaining from any purchases except for money, there had been nothing wrong; and I told my young gentleman that I had found out the cause of his apparent annoyance, and wished to know how he had been so unmindful of my advice. The truth then came out; Gable had made the most of his enthusiasm, and inveigled him into the purchase upon the condition of receiving the money at five shillings per week, and was there, from time to time, threatening the boy to tell me unless he could get five pounds from him; this was wrong, the youth breaking his spirits. I need hardly say the tulips were not worth the money. I sent them back, and insisted on a return of the cash he had advanced. This was reluctantly agreed to; and, rather than disappoint the lad, I advertised for a *bed*, which I got for half the money, and which was worth three of *the one he* he had first bought; and, having severely lectured him upon departing from the course I had laid down, I provided him with a suitable stage, that he might not grow his flowers under a disadvantage; and, seeing that he was bent upon the cultivation of flowers, I was advised to lead rather than check him. The tulip bloom came round, and he had pretty good ones; but as to a night's rest, there was hardly such a thing for himself or anybody else. He was out at twelve or one o'clock to see that all was right; and if there were the least indication of wind or frost, for weeks before they opened, he would get up and cover them in the night with a second layer of mats. He was the first I ever saw who never allowed the frost to touch even the bed from the moment the bulbs were in; nor do I recollect having seen his flowers so notched and blighted as I have seen those of other persons. This may be of service in restraining young enthusiasts from injudicious outlay, particularly as there are too many florists ready to take advantage of inexperienced amateurs.

A BORDER OF BULBS.

We have seriously thought of cultivating a portion of our garden for bulbs only, because among them we recognise the harbinger of spring, the main strength of April, May, June, and July, the beauties of autumn, and the cheering blossoms of winter. In fact, some of them are always flowering; some defy the inclemency of the frost, and peep at us through the snow: nor is this all—for, once plant your bulbs, and you may leave them two or three seasons in the ground without any other care than

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weeding and occasionally stirring the surface. The bulbous tribe propagate themselves, and if you choose to take them up when their leaves turn yellow after blooming, you find a considerable increase; therefore you may begin your borders with rather scanty planting; the second year you will find them thicker; and the third, at the most, you should take them up and sort them; the full grown ones you may plant again for bloom, and the smaller ones may be planted in a bed, or a row, to grow larger before you calculate on their flowering, although you may find many of them bloom the first time. Upon the whole, then, we strongly recommend bulbs to ensure flowers nearly the whole of the year, and no one will deny their claims to very prominent places in the best regulated gardens. The following, with their months of blooming, are worthy of attention:—

January—Scilla bifolia (various), præcox, siberica, and verna; winter aconites.

February—Crocuses of many sorts; scilla bifolia, præcox, siberica, and verna; snowdrops; winter aconites.

March—Early tulips, single and double; early campernel; jonquilles; crocuses of many sorts; Persian irises; cyclamen; coum; scilla italica, japonica, nutans, and patula; snowdrops.

April—Eafly tulips, single and double; parrot tulips; large double jonquilles; sweet and scented ditto; crown imperials, various; dens canis, various; fritillarias, various; grape hyacinths; hyacinths, various; oxalis, various; scilla amœna.

May—Parrot tulips; late tulips; polyanthus narcissus, and others of many kinds; irises, English and Spanish; gladiolus byzantinus; hyacinths, various; hyacinthus amethistinus.

June—Iris tuberosus; gladiolus atro-roseus, Colvillii and Herbertii; lachenalia tricolor; white lilies; lilium longifloram; ornithogalum pyramidale; scilla peruvianum.

July—Irises; pavonia and susiana; amaryllis formosissima; longifolia alba; ditto rosea; lilium chalcedonicum and tigrinum; pancratium maritimum.

August—Gladiolus cardinalis; feu brilliant floribundus, gendavensis, insignis Ma'amselle Rachel, nivalis, psittacinus, Queen Victoria, ramosus, and rosa mundi; anomatheca cruenta; ferrari conchiflora and trigida; lilium lancifolium, various.

September—Saffron crocuses; gladiolus emicans and formosissimus; amaryllis atamasco and belladonna; cyclamen europeum; amaryllis lutea.

October—Saffron crocuses; amaryllis lutea; crocus nudiflorus and serotinus; Guernsey lilies.

November and *December* will owe any flowers they produce to the protracted flowering of last month's subjects, or the prematеur flowers of those generally flowering in the early part of the year; and, if the season be mild, many of these sports of nature will appear.

All bulbs should be purchased early in November, and planted immediately.

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LANDSCAPE GARDENING.

We wrote the following fourteen years ago for a very popular standard work, and one of the severe critics of the day said:—"On the subject of landscape gardening, Mr. Glenny has given what we have no hesitation in saying is the best lesson on landscape gardening that was ever comprised in so small a compass." Whether it be or not we give it at the request of several distinguished amateurs.

It has been already said that "a pure taste in the disposition or arrangement of land, wood, water, and buildings, in a real landscape, cannot be well transferred in writing from a master to a pupil;" but there are certain rules which can be transferred, and which every one forming a landscape garden may profitably bear in mind. In the first place, nature should be imitated in all her most pleasing features only; and in the next place, as many of these pleasing features as possible should be brought together so consistently as to harmonize well. It is not enough to make a serpentine road, and to stick about at random clumps of trees. This would be, or rather might be, done so as to produce effects as ugly and inconsistent as possible. A road ought never to be straight; nature affords us no such feature, or if she did, it would be considered that nature was *out of* character: but if roads curve here, and sweep round there, you *will find* some cause for it. It may be said nature makes no roads; but she points out very distinctly where they are to be made; those who have to travel go as straight as the nature of the scene enables them; they do not cross a high mountain from choice, they will swerve to go across the lowest portion; people do not go through a wood when they can go round it, nor do they go down a hole and up again, or, through water, when they can go by them. In forming a landscape garden, therefore, the road should be carried in graceful sweeps round the space to be laid out, sometimes close to the boundary, at other times some distance from it; but having done this, you must make excuses for it; clumps of shrubs, or ornamental water, or mounds, must be put in such positions as to make it appear that the deviation from a straight line was caused by the obstruction. All clumps should be within the distance that implies the road comes as near as it could to the plantation. All the chief planting should adjoin the road or the outer boundary fence, or be sufficiently near it to form a feature with it, and it should be in masses, and not in frivolous little groups and patches. If a place be ever so small it should be planted as a portion of a large one. Nothing can be worse than doing things on a small scale to get more features into a little space than is consistent; by the same rule, let a large place abound with pretty spots, which would look well if cut off from the entire estate. In small places always plant the outer masses so as to conceal the real extent of the premises; this is easily done by forming apparent outlets, the ends of which cannot be seen, and consequently giving the same effect as if they had reached three miles instead of three yards, or perhaps less. Water should never be straight any more than roads; and if there be a canal of this description, open out a large space here and there, and entirely break all signs of a straight margin—and let this be done on both banks of the canal. Besides this,

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some judicious planting at particular points will greatly aid the same effect. It has been said that a serpentine walk will not do by a straight building; but this is an egregious mistake, because we have nothing to do in such case but to plant irregularly along the straight line, that is to say, plant in some places a few feet only in thickness, in other places thirty or forty, preserving the massive appearance by making the uneven outline nevertheless whole, that is, the narrowest part to swell out gradually, not abruptly, to the wider, or the widest, as the case may be. Again, in landscape gardening, the belts of plantations outside, whether the boundary be straight or crooked, should not be even, nor composed of one sort of trees, nor be planted at equal distances; nor, unless there be an object in shutting up the place from public view, should the planting necessarily be all continuous. If there be any fine view, it would be folly to close up the place; either lower the planting and have the shortest shrubs, or discontinue the plantations for a length or two; but this must be dependent on the owner. Many insist on shutting out the public by a broad belt all round; but if there be no variation in breadth or height, it is not landscape gardening. The masses of planting inside a road, that is, the side next the mansion, should be sufficiently dense to occasionally shut out the view of it along a portion of the drive; and specimen trees, or small groups of trees, may be planted at a short distance at the places where there is none adjoining the drive, so that the opening, as it were, should be partially relieved. A thousand circumstances may require a particular exercise of taste; but, as general rules, almost without the chance of exception, these should always be borne in mind, whether in the improvement of estates which have been neglected, or the original laying out of the grounds round a mansion.

BROKEN PROMISES.

SIR,—Being a reader of the FLORIST for near five years, I feel myself to be as a member of a great social family, and because you encourage those of your readers who are not in practice with writing, to correspond with you, promising to correct all errors, I venture to appear before you, not with an article for the FLORIST, but for instruction through its medium. In our little work, the double number, about which there has been so much talk, No. 167, page 354, on the cultivation of the grape vine, signed B——, the writer promised to continue the subject; I am sorry that it has not been continued, but perhaps you will say you cannot be responsible for the same writer finishing his subject. However, I believe that a few pages on the cultivation of the vine, the easiest kinds to grow with simple instruction about the treatment from one end of the year to the other, would be accceptable to some of your readers. I read of vines bearing well without fire; a person near me has sixteen bunches this season, and he took no notice of ripening the wood, he put no fires to; and mine I expect are black Hambro's, with all the care that I could take, which have been planted four years, and are as thick as my forefinger, have not given me a single grape. I have flues, and the canes were as

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brown as a nutshell last back end; but either they have not been ripe enough, or I must have missed it some other way. I put fire to on the 10th of March, and the glass averaged, for the first two weeks in the evening at nine o'clock, about 54, and in the morning, half before six, about 46. The border is outside about four feet deep, and nine feet broad, walled round, about eight inches of pieces of bricks and stones at the bottom, and an outlet for any water; the stuff is composed of sods, and manure, and small stones to keep it open; I cannot get the vines out in winter, but I draw them as near the front as I can. I have kept them as cold as I could in winter, to the injury of the plants. Some may say, why give an article of this sort, we knew all this long ago. Such must consider that all the members of a family are not alike learned; the father may have overcome all the difficulties of his profession, while a younger one of his family is only learning, and another just beginning. There is youth, middle age, and manhood; and I have no doubt but you know that you have these three classes of your great family to instruct and please.

I think that instead of saying, as in No. 173, page 179, that the stage of a greenhouse should be as near the glass as it is possible to construct it, due regard being had to the growth of the plants, it would be better to say what distance the stage should be from the glass. Some of your readers, in want of knowledge, do not know what distance from the stage to the glass. Due regard to the plants means, some may be five feet, some four, some three, and some two; the stage of my house is from five to ten feet from the glass, and I cannot grow geraniums and some other things well, for my life; and as I don't like to give them up, being a lover of them, I shall feel greatly obliged to you for the best plan of a geranium-house complete, or pit, or both. One, perhaps, will cost less than the other; being a joiner, I may be able to make a wood one myself, but there is more pleasure in being able to walk into a nice little house, and see the plants and flowers all before the eye, than in having them in a pit, although it would be very useful. I think, perhaps, both are wanted; before I shall have all that is necessary, you will be kind enough to tell me what I should have to fit me up for the growth of most common things, from a cutting to a perfect plant. Instruction on some economical and efficient plan of heating a greenhouse would be useful, and I think not out of place in the MIDLAND. I see several little works by Glenny; will you please to mention those only which you think will be useful for me, a cheap little work on vine-growing would be useful, unless you mention all in the FLORIST that is necessary. I also want a little work which tells the time to change plants into their blooming pots, to suit the time of their blooming, and the size of pots most suitable; and the soil, I have frequently not changed, and sometimes I have shifted a plant at the wrong time, in ignorance, and disappointed myself of the pleasure of seeing it in bloom. I think Mr. Rivers' little work on the "Orchard House," would be interesting. Would it not be well to mention the publishing price of those useful books that the working people might at once know whether their pockets were in a position to purchase? I think, sir, you will see my feelings; I have been plain, and have spoken to you with the same freedom as working men speak to their intimate acquaintance when they are talking over their

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wants and their disappointments. I apologize for the trouble I have given you, and, perhaps, I have given you more work than you can attend to at once. Well, I will leave it to your convenience, only don't forget me, and oblige yours truly, JOHN BURROW.

Beeston Hill, Holbeck, Leeds.

FLORISTS VERSUS BOTANISTS.

IT was in 1831 that we began to write upon floriculture as opposed to botany; and of such consequence was our little scribbling at that period considered, that in a short time the lecturer at the Horticultural Society's rooms (whose limited perception at that time saw the handy works of the florist only in the grand alterations of the dahlia) ridiculed and sneered at the double flowers, and talked about our involving species in endless profusion. It was not long after that when the whole weight of the professor's authority came down in anathemas against hibredizing, and in our little way we showed up, as well as we could, the presumption and folly of daring to set a limit to the march of science. We could understand well enough that when learned doctors would quibble and quarrel about the identity of two plants, in which some trumpery difference was to be detected with a five hundred power magnifier, the art of fertilizing (which could produce a hundred much more important distinctions with a pinch of seed), would make a pretty mess of their botanical differences. In short, we saw in the progress of floriculture a new era, and, as we anticipated, the very men who accused us of confusing species and genera with our seedling varieties, would be obliged to recognise the very beauties which they then condemned, and pretend to admire (whether they really did so or not) the splendid changes, which knocked their genera and species on the head. The FLORIST is a king of flowers, a potentate among them; he has only to say what shape, what colour, or what habit will look the most beautiful, and, henceforward, the small flower becomes large, the thin flower becomes thick, the starry flower becomes round, the single flower becomes double, the long gaukey plant becomes close and bushy, and any other change he thinks fit to effect is attained, by degrees, under Providence, as a reward for his skill and perseverance.

MANCHESTER AND SALFORD WORKING-MEN'S BOTANICAL AND HORTICULTURAL SOCIETY.—On Saturday evening, June 6th, the Half-yearly Dinner took place at the house of Mr. George Eckirsley, Bridge Inn, Regent-road, Salford, when upwards of thirty members sat down to a most sumptuous repast, including all the delicacies of the season, on which occasion there was a grand display of Botanical, Horticultural, and Floricultural Specimens and Flowers. The cloth having been withdrawn, the presentation of prizes took place; after which the usual toasts were given and responded to, and dancing, occasionally enlivened by singing, was kept up till twelve o'clock, when the company broke up, highly delighted with the evening's entertainment.

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HOW FLORISTS MAY SAVE MONEY.

We have now for twenty-five years ventured to predict what fruit, flowers, plants and vegetables would satisfy those numerous amateurs who have no money to fool away on worthless subjects, but do not begrudge a good price for a first-rate article. The *Garden Almanac* has proved itself a guide to prudent purchasers; and during the whole period that we have ventured to direct, we have made but a few mistakes; so few, indeed, that the whole of our delinquencies can be put in a single line. Our list of the best things present a great sameness. The once best subject retains its place till we see something that beats it; but when we discard it for a better, the grower is not called upon to do so too. Those who have to buy need not purchase a thing which we have admitted for a better, but those who possess it may with propriety continue to cultivate it. We have from year to year carefully corrected our lists of the best varieties of everything worth such distinction; and we entreat those who have not yet acted upon our recommendation to consult those who have, and profit by the advice they receive; all we venture to say of our lists is this:—they contain the names of none but really good subjects, such as a man of great taste and small means would wish to grow; and whether he selects half-a-dozen or all, he cannot find one unworthy of his notice, his culture, and his care, nor one which is not worth its full market price. As, however, the owl fancied its young ones the most beautiful, so the owner of a novelty believes it to be a good deal better than it is. He may be honest in warranting a thing "first-rate," while we see blemishes which condemn it in the eye of a judge; nor are dealers and raisers a jot more discerning when they congregate and call themselves a society, to give each other certificates of merit for subjects utterly worthless. On this account we beseech our readers to treat with perfect indifference the number of certificates granted to a flower. There are societies formed for the express purpose of counteracting the check which we constantly oppose to the wholesale deceptions practised upon amateurs. A hundred new varieties of one flower are annually offered at the high price demanded for first-rate novelties, when not a dozen prove worth the money. If we happen to see a good thing in private hands, and recommend it to our readers, a score of interested persons run it down, because the raiser has not courted their certificates, but trusted to our single evidence. The great evil, the great drawback, to real progress in floriculture and horticulture is the unceasing efforts of the trade to get first-class prices for second or third-class flowers, a constant straining to push forward novelties, not so good, in many cases, as those we already possess; and so long as horticultural societies will appoint dealers to act as judges, so long will these second and third-rate subjects be recognised and encouraged at the expense of amateurs. With Dahlias great coarse flowers are the fashion, though opposed to "The Properties of Flowers," the acknowledged standard. Call in, as judge, any of the large growers, the sellers of coarse flowers, and the largest are made to win. Call in an amateur, who has a character to lose and a grain of taste, and the stands of compact flowers are placed before the largest. Nor will it be otherwise, so long as dealers have to

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decide; for there are ten coarse flowers let out for one really compact variety, and while there are ten to one to push off, the dealers know that the only way to give an artificial value to coarse novelties is to make large coarse flowers win everywhere. But is the seed trade exempt? A new pea brings half-a-crown or five shillings per quart, while an old one is perhaps sixpence. So we have new names given to old peas, high characters given to them, and when grown they prove the same as we have already been growing for years; or it may be, a really new pea comes out, and proves worse than many old ones. We have, therefore, recommended but few varieties of anything, but these are distinct and choice. We give them for some excellent quality, size, season, flower, hardiness, facility of culture, beauty, form, or some distinguishing point which can be appreciated. We do not say we give all, because one variety has many names. The Horticultural Society has proved that many a good thing has a dozen names; but, inasmuch as we have never deceived our readers, we beg them to resist every attempt to put them off with other than the subjects they ask for. The nurserymen who advertise with us can serve people as well as any one in the whole trade, and they are all interested in serving folks better. They in part identify themselves with our recommendations, and strive to second our efforts; while almost all those who make their money by deceiving the amateur into injudicious purchases, shun us as owls avoid the sun. Our readers, we hope, are by this time too confident in us, and too enlightened in themselves, to become an easy prey; but we must not blind our eyes to one glaring fact, that for one variety of anything that is a valuable acquisition, there are twenty entirely worthless palmed upon the unwary; and we have the best evidence in the world that we have saved the public thousands of pounds that would have been squandered among the least honest of the trade. Our next Almanac will contain as usual our annual lists of what to buy; and if people go beyond this, they may wish the money back. G. GLENNY.

THE DIVISIONS IN THE NURSERY TRADE.

THE nursery trade forms two very distinct parties, and one is preying upon the other. Complaints pour in upon us that there is no dependance whatever upon the descriptive catalogues of novelties, nor upon the advertisements in the garden newspapers, nor upon often pledged as often broken words of too many dealers in and near the metropolis, and others who associate with them. Very numerous cases are stated of sets of geraniums, verbenas, antirrhinums, fuchsias, and other plants, rarely producing one truly described and useful plant to a dozen that are worthless. These complaints come from country nurserymen, who, being anxious to get whatever is good, are led too often into purchases which involve them in severe losses, and they one and all say that the spurious things guaranteed as good form the staple trade of by far too large a class. Thus far it is the honourable portion of the trade complaining against the unscrupulous, who have, by a very deeply laid scheme,

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secured a kind of monopoly. But we beg the fair tradesmen not to fall into the common error of supposing there is any monopoly of good novelties. Out of fifteen or twenty hundred dealers, there are, perhaps, some forty or fifty who almost depend on the sale of what they please to call novelties for their living. Not that they have more good ones than raisers in different parts of the country; but as they calculate on sending out each from twelve to twenty a year, it matters but little what they are. All the provincial and fair-dealing nurserymen, as well as amateurs and gentlemen gardeners, are absolutely cheated with things no better than they already possess described so as to give a false impression of their value to florists, and, charged at a price, we were going to say, ten times their value; but being for the most part absolutely worthless, any price would be too dear. This system is kept up by constant advertising to mislead the inexperienced. These order things of their own nurserymen, who are thus made victims as well as themselves, as a country nurseryman tells us:—"If we look at the catalogue of any one of those wholesale dealers in new things for the last ten years, make out a list of the whole of their novelties, with their prices, and see the vast amount which every buyer has been robbed of, by selecting the very few that were good, and adding up the rest, it would exhibit an amount of fraud not attempted in any trade of the United Kingdom, and only approached by the betting-houses." There is too much truth in this, and it is a sad thing to observe that respectable men have been corrupted by seeing such a ready means of making money without the risk of the Central Criminal Court. But how is this to be put down? Only by a resolution among the respectable members of the trade and of the gardeners and amateurs who deal with them to treat the men who have been defrauding the public for years as they deserve, by rejecting their novelties until a year after they are out; by repudiating the descriptions put into advertisements and catalogues, treating them as a judge would treat a witness who had perjured himself. "A liar is not to be believed though he speak the truth." But those who are enthusiastic, and love a new and good flower, may rest assured that if there were a good one we should see it, and no matter whose hands it were in, we should recommend it, so that it would not be lost, even the first year, for want of a proper character. We shall gladly lend a helping hand to destroy the fraudulent system that we have already checked, but which is too successful while a single enthusiast is silly enough to buy a flower the first year without a much better character than that given by people who have year after year wilfully put out worthless novelties. We see nearly the whole of the horticultural press entrusted in seconding the efforts of these floral cheats, whose advertisements are so many bribes, and although perhaps they hardly comprise fifty out of the two thousand in the trade, pay more to publish their new things than all the rest of the trade spend in advertising their sound plants and seeds. "Good wine needs no bush" is a very old saying; but a famished traveller wants some guide to show him the inn distinguished from a private house; and now that the post offers such facilities for the transmission of seeds, cuttings, and small plants, our most distant friends, who mean fair dealing, might advertise their trade with great advantage. There is one nursery which sends out

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cuttings by thousands, and from them issues extensive catalogues of the plants and prices at which cuttings are sent to any part of the United Kingdom. Morse, of Dursley, has established a trade for cuttings only, and it is of the greatest consequence to people at a distance, who not only get subjects at a third of the price of plants, but they save the enormous cost of carriage.

WATER CRESSES.

The most successful cultivators of the Water Cress are such as can command a supply of running water near the springs from which it issues, as in the beds at Little Marlow, in Buckinghamshire, and at Rickmansworth, in Hertfordshire. Wherever a flow of water can be kept in command, either to let on or off the beds, there in general the Water Cress may be grown in considerable perfection; but if the supply be from the overflow of a pond, or other comparatively still water, there is generally so much weed, slime, and insects in it as to render it hardly fit for this purpose. However, where it is wished to grow this plant, the first thing is to have a sluice at the head of the ground so as to regulate the supply of water. If the beds are to be made in the course of the stream, then the bottom must be level, and a very slight fall given to it. If the space be two or three yards across, then at about six yards down the stream an embankment should be made sufficiently high to keep back about one foot of water over the whole of the perpared bed. In this embankment a sluice should also be made so as to regulate the depth of water, or to lay it dry if necessary. Below this first bed others may be made according to the quantity wanted. If the bottom of the stream does not afford space enough, a system of alternate ditches and banks may be dug out of the adjoining land, having a leading gutter for the supply of water, with a sluice in it at the head of each ditch, and a similar gutter at the lower end to carry off the water. The banks should be left broad enough for cropping, and they will be found excellent places for crops of raspberries, strawberries, and all summer crops, from the facility with which they may be watered. When the beds are thus prepared, the bottoms should receive a thick coating of gravel, chalk, or some such material, if not naturally furnished in that way. When all is prepared, the plants may be put in in a regular manner, about a foot apart each way. The plants should be a moderate tuft of the strongest and best of the old plants, and they must be kept in their places by laying a large stone on each tuft. After planting, the water should be let in so as barely to cover them, and not so much as that if a brisk stream can be kept up, as it would displace the plants. When they are fairly rooted and growing, the water must be deepened accordingly, especially in frosty weather, when the bed in use should be flooded deep enough to keep the plants far enough under water to avoid ordinary frosts. The beds should be planted in succession every one, two, or three months, according to the demand, and the old ones destroyed as soon as the plants become weak and foul.—*Hort. Mag.*

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THIRTY YEARS OF THE DAHLIA.

Few plants came more rapidly into notice, when once fairly introduced, than the Dahlia; and, like all subjects which attain great popularity, it was the cause of great emulation, and soon afterwards of great success. The introduction of double varieties, from Holland and France, created an enthusiasm rarely equalled. To be first in the attainment of a new variety was a sort of triumph aimed at by many, and so great was the thirst for extensive collections, that, like the roses, the smallest conceivable difference was enough to call for a new-named sort to add to the catalogues. The raisers and dealers travelled far and near after novelty. A degenerate race of flowers sprung up, and the sole object appeared to be to make an extensive catalogue. It was not uncommon in these comparatively early days to find a batch of seedlings of which not one was double; and here and there were found, especially in Ireland, France, and Holland, flowers of the anemone form, others with a larger than average number of petals, and they much narrower than usual; the former were called Anemone Flora, the latter Chinaaster Flora; and various were the changes rung upon names even in these two monstrous families. Then there were globe-shaped flowers, which were sought after with great avidity; and nobody in the trade thought of putting a less sum than half-a-guinea as the price of a novelty. There were at that time a great number of persons whose ambition it was to boast of the largest collection, a kind of customer very useful to the trade. All at once, showing for prizes became a fashion. It commenced in London, by some one giving a silver cup for the best twelve blooms that should be exhibited at Billingsgate, a locality easily accounted for by the fact of Mr. Goldham, the clerk of that market, being an old and influential florist, and having established a society called the Friendly Society of Florists, at that place, which society comprised about twenty of the most successful amateur and professed cultivators; and as soon as the meeting was announced, the rooms of that society were suggested as a fitting place for the proposed show of Dahlias. There is no doubt, that show alone made many persons commence growing the flower; and after the dinner, which was usual on such occasions, a rough outline of rules and regulations for a new society were drawn up; and then shortly after, there was a show at Hammersmith, at which the prizes were silver medals, on which the inscription was, "The Metropolitan Society of Florists and Amateurs, established 1832."

The gardens may be said to have at that time been overrun with Dahlias of every form and fashion. If there be anything in the doctrine of morphology, that flowers are malformed leaves, there could not be a more whimsical family of leaves in cultivation, for the noble flower of the Dahlia, which, in the best varieties, had not half reached perfection, had been frittered down to a weed, and a very untidy weed too. At this period but little had been said of what constituted a good Dahlia; catalogues were preparing with the usual, or a much larger, assortment of Anemone Floras, Chinaaster Floras, and Globe-flowered kinds; but the Metropolitan Society did the first serious mischief to them, by deciding

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that those kinds were not to be shown for prizes, and publishing the description of the properties which constituted perfection. Here was an end to the monster family; most growers discarded them altogether; few, if any, bought any more; and the dealers who depended on the usual call for novelties, were sadly disappointed. The consequence was, that all who raised seedlings had some guide for their selection; a general improvement was soon perceived, and has been progressing ever since. One of the necessary consequences of showing the florist what he is to strive for; not that he has an opportunity every season of bettering his collection, but that he has the means of knowing how to avoid adding new flowers that are worse. The trade even at this period, encouraged by the rage for new varieties, still greedily purchased any novelty of which any taking description could be given. So anxious were they to grasp at everything, that anxious novelty-hunters were trying to supercede each other in the purchase of a flower without the slightest knowledge of the parties who had raised it; and nine times out of ten they retailed all the alleged good qualities of their newly-acquired treasure, got it talked about pretty generally, made the Dahlia fanciers mad after it, and sold in large quantities new kinds, which turned out good for nothing. The increase of the exhibitions did much towards correcting a bad taste and preventing a good taste of this blind work of both dealers and amateurs; but it damped the ardour of many when they found, annually, that the greater portion of the new flowers were totally useless; those who had done most business incurred the greatest displeasure, and eventually found it necessary to discontinue it altogether. The most effectual check put upon this wholesale deception was by the plan of proving flowers one season after they are raised, and exhibiting them during the season of bloom. This enabled persons to buy flowers of their own choosing to assist their collections, and but few were content with the descriptions, while they had seen enough for these purposes with their own eyes.

The prizes awarded to seedlings by the Metropolitan Society of Florists were, generally speaking, a tolerable guide; but even there it was difficult to find a judge who would, on looking at a flower, keep in his mind all it ought to be.

A novelty in colour was sure to charm even an old fancier: a brilliant tip, a well-contrasted shade, or a delicate margin would close his eyes against long or notched petals, confused eyes, and starry outlines. There was no resisting novelty. Even up to a late day, a new colour would secure the safe passing of a very middling form; for we have instances before us, even within the past two or three years, of coarse, long, reflexed petals, opening like so many funnels, and doubling under to form almost a globe, passing what may be called an ordeal, as a fine flower, whereas, had it been any other colour, it had been called coarse and bad. There is, however, something to be said in favour of even this case; for it may be well argued, that we cannot obtain all points perfect at once, therefore, a decidedly new colour must be seized when it can be had, and retain its place until something of the same colour comes of a better form. In the present day, as heretofore, size has a great charm for many persons; and even judges will not lose sight of what is called a fine growth, while they hardly give the necessary attention to the outline and the centre. Com-

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pactness is so essential to the character of all flowers, that size, unless diminutive indeed, should be a secondary quality in all men's eyes. The style of flower, which after some years of writing, and showing, and judging the dahlia, seems now to prevail, is greatly improved upon the old, large, and but ill-shaped varieties. The uncertainty of the dahlia has long been the subject of great speculation; but it is its uncertainty which makes people fly with more avidity to new varieties, and praise moderate or even inferior flowers that come constant. Some grow a great number of a sort, and very few sorts; others grow many varieties, and not more than two of a sort; and the latter will often be able to show, when the former cannot, because all dahlias have their seasons, and he who grows the greatest variety of flowers (so that they be show flowers) will always have a better chance of showing a given number of blooms, than he who grows fewer sorts and the same number of plants. Some dahlias grow best early in the season, others best late. In some cases a dahlia is constant enough in ordinary condition, but can seldom be caught in first-rate style; such flowers are more frequently condemned by first-rate florists than by common people, because in their ordinary condition they are offensive, and hardly expected to be otherwise. The uncertainty of the flower is, nevertheless, one of the great charms of the fancy; it is impossible that anything which is always alike can *excite* strong interest. Culture has much to do with the condition of a flower; but all the culture in the world cannot make it certain, and hence the charm of cultivating. It is to be recollected that the leading fault in some dahlias is extreme doubleness, which prevents the petals from developing themselves in perfection. They fold round and form tubes open at one end, or quills, which scarcely open at all; in both of these cases there is a want of form. The face of the flower is confused with the backs of the petals which are of a dull colour; there is no imbrication, there is a vacancy between them, caused by their folding up into a narrower space than they would have occupied had they fairly and freely opened, and the outline of the flower, as well as the face, is confused. These flowers are uncertain, because, although they are showable, and are frequently shown in that state, they detract much from the stand in which they are placed; there is nothing more offensive in a dahlia than the showing of the backs of the petals, which are always worse and more dull-coloured than the front, and entirely destroy the beauty and symmetry of the flower. But these very dahlias, which are so offensive generally, and throw their petals in tubes or quills, are so beautiful when they happen to open freely, which in some seasons they will, that then nothing surpasses them. There is another singular fault in dahlias, and it arises from the nature of the properties laid down, the eye or centre should be up to the surface. Now, the petals, to form a good centre, have to lean inwards, and join the tips together in the middle; every row of petals have to rise and open, if they do not absolutely turn back. Unless, therefore, the petals are short, their rising and opening leaves the unbloomed ones sunk down, and thus creates one of the fatal blemishes; but such flowers come now and then, and give us a full and compact eye at the same time. Dahlias, however, require unchecked growth. They should not be exposed to north and east winds; they should never

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be watered without having it all over their foliage; and nothing so contributes to keep them from thrip and insects in general as syringing them with a garden-engine, with a fine rose to disperse the water in small particles, but with some force. To grow them through hot weather, without often wetting their leaves, is distressing; and the ground, if wetted at all, should be soaked all over instead of merely at the roots. For we have found the dahlia, where once established on good ground, quite capable of perfecting itself, and giving as fine flowers without artificial watering as with it; nevertheless, syringing keeps them very clean, and is a great preventative to insect ravages.

SLUGS AND SNAILS.

THERE is hardly anything in the whole range of garden plagues much worse than slugs and snails. There is no season but they are present and devouring the crops if they be not kept under by all the means we know of. They may be caught in great numbers by laying cabbage-leaves on the soil and taking them up twice a day, when the pests will be found on the under side; we have known a quart to be taken up in one round upon twenty roods of ground, under flat pieces of board or tile. Pantiles are especially tempting to them, for, being arched, the slugs are enabled to get under without exertion, and a score may be picked off a single tile. It may be thought that in time this would thin them; and, if persevered in, a great deal may be done towards extirpating them altogether. Again, they are greatly incommoded by repeated hoeing, raking, and stirring of the earth. In neglected gardens, where weeds are allowed to grow up in abundance, they breed so fast that for some time afterwards it is scarcely possible to raise a crop of anything. Sowing a plot of ground with quick-lime just before daylight will kill every one that the lime touches; so also will salt, but there is great danger of the plants, because if there is enough to be effectual with the slugs, there would be too much for all tender crops. It has been recommended to put cabbage-leaves in an oven, or in some other way to partially roast them, before laying them on the ground, because it draws the vermin from a long distance; but this is often troublesome; and there is one thing quite certain—whatever be the remedy or remedies adopted, they will require to be persevered in a considerable time, for you will hardly find any abatement of the nuisance for many days. We recommend, if they can be had, cabbage-leaves strewed upon the ground and taken up once or twice a day, knocking off all the slugs into at pail of salt and water; tedious as it may seem, it is the best, and safest, and the most permanently effectual plan. It is very probable that one lot of leaves may be enough to extirpate the larger quantity; and when the leaves are done with, watch the opportunity before day-break, and sow lime on all the stragglers that are out and exposed.

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DAHLIAS IN DEVONPORT.

SIR,—At your invitation I have sent what I and a few other amateur dahlia growers consider to be a list of twelve dahlias that is not surpassed by any grown round about this neighbourhood; namely:—

Chairman ...	(pale-yellow buff).
Pre-eminent ...	(purple).
Lord Palmerston	(deep scarlet).
Dr. Gully ...	(straw tipped).
Empress ...	(light shaded).
Colonel Wyndham	(crimson).
Lady Popham	(white-tipped peach).
Golden Drop ...	(yellow).
Robert Bruce ...	(orange).
Rosebud ...	(rose).
Mrs. Turner ...	(cream).
George Elliott ...	(rosy purple).

NICHOLAS KELLY, Devonport.

ROSE PROPAGATION BY CUTTINGS.

THIS month, cuttings of the Hybrid Perpetual, Isle de Bourbon, Tea-scented, China, Noisette, Macartney, Microphylla, and the climbing roses, strike readily in a hot-bed, with a gentle heat. Take as cuttings the half-ripened shoots, with a heel where practicable; if not, cut the shoots even through close up to a joint, and plant them firmly round the sides of the pot in sandy loam; give a little sprinkle of water, and put them in the frame. The care they want is, to see they do not get too dry or too wet, to shade from the sun and, when the air is not too drying, to give a very little air. As soon as they are rooted, pot them separately into very small pots, set them in a *gentle* heat till rooted round the pot, when they must be gradually hardened to bear sun and air. They will require to be kept in a greenhouse, or in a pit that is provided with fire heat in some way, for they are very apt to damp off when covered up in cold frames during long-continued frosts. The same classes may also be struck under hand-glasses, with a gentle bottom heat, during the same months. Cuttings put in about the middle of October, in a warm, sunny, dry situation, under hand-glasses, will strike root in the course of the winter; they merely want all the air they can have in mild weather. If the weather is damp, the glasses should be tilted up with small pots. During frost, the glasses must be shut close and covered. Cuttings prepared in any of the above ways, if planted out into beds about the middle of May or a little later, should the season be backward, will flower beautifully during the latter part of the summer and autumn; and if protected in winter, will flower finely all the following season. In planting, take care to range those of the same habit together.—H. J.

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LAWNS.

MAKING A LAWN.—This operation in a garden is very like laying down a carpet in the house. The space must be dug all over, trodden hard, raked even, and rolled. The turfs, if properly cut, should be all of a thickness, and all of a size, three feet long, one foot broad, and cut as level and as square as possible, otherwise your work will be trebled. You then unroll your turfs and begin by laying the first row end to end, to form the outer edge, and continue the next row by pushing the turfs close up to the first. If you find any very great inequality in a turf, throw it on one side; you may make yourself a good deal more work by trying to adjust a bad one, for all your others must follow. When the turfs are all laid down, you must get a turf-beater to knock down any inequalities and make the roots press into the soil. If it be very dry weather, use the water-pot freely after beating, so as to fairly saturate the turfs; and when the surface has dried enough to let the roller go over it, give it a good rolling with the heaviest iron roller you have; and if the weather continues hot, give the grass a second or third watering, for unless this work be done well, a hot sun might curl every turf. However, the best season for this work is the autumn; everything works well then; turf has the benefit of a cooler temperature, and before the winter is over it is firmly rooted, and ready for the scythe.

There is no part of the garden that requires more attention than the lawn, because there is no department that sooner shows the consequences of neglect, or that retains them longer. Let the grass be in every way good, all that we could wish; and let it go a fortnight too long in growing weather unmown, and the roughness may last the greater part of the summer. We need hardly say here, that the mower should be one of the best of workmen, that he should be able to cut very close, and very even, leaving no marks of the scythe. To do his work properly, it should be all done while the dew is on the grass; nor should he allow the grass in the growing season to go long together without cutting. As fast as he mows, somebody else should sweep up the cuttings, and remove them, for in hot weather it would change the colour of the grass beneath in a very short time. Before the morning of cutting, the grass should be rolled, and if there be many worm-casts, it should be bush-harrowed, or swept with a coarse broom, to spread them about before rolling. If the lawn be inclined to produce moss, sowing wood ashes before the dew is off in the morning three or four times during the season will be of great service, and nothing must be omitted in the way of close cutting, for nothing but that will keep a good bottom. If a lawn has been neglected, and got into hollows and bare places, a coating of road-drift all over it, so as to make the surface perfectly level, will be the only good and quick remedy. Let there be new grass-seeds on all the bare places before the road-drift is put on, because in the raking, rolling, and levelling the coating, the seeds will be sufficiently disturbed to bring plenty near the surface, and in a short time will produce a fine coat of grass, of the old and new together, and the surface being rolled from time to time will be so levelled, that the grass all over can be cut even and close; in fact, it can be made far better than it ever has been, in consequence of the better level and thinner growth.

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To keep a lawn in first-rate order, there must be a heavy roller, one equal to the strength of two men, and this should be used after the ground is a little softened by rain, and the grass has got dry again; not that it is necessary the grass should be dry, but that after rain, there should be some twelve or twenty-four hours to let the wet soak down a litte. If worms are troublesome, give them lime-water, pretty strong; it is better almost to discolour the grass a little while, than to be pestered with worm-casts, for it renders the lawn useless. No ladies can walk where worm-casts are thrown up. Lime-water will bring them all up to the top, and you have only to pick them up and put them into a pot of lime, or salt and water.

FLOWERS AND TREES IN SQUARES AND GARDENS.

We are glad to read in the parliamentary papers, that a noble lord brought in a bill for preserving the trees and shrubs, and the general condition of all public parks, gardens, and squares. In doing this the dilapidated state of Leicester Square was particularly noticed. But this is to be attributed to the disputed title and liability. We once endeavoured to get possession of this site upon terms that would have insured for it a better fate; but the more we went into the title, the more confused it became. "Once upon a time" the inhabitants of every house in the square had a right to walk in it, but there was a condition that they should pay an annual sum towards maintaining it in a good condition; at first a few declined, and then every year added to the number of seceders. Those who paid had a key, but at length there was not a sufficient number to keep it up, and it was abondoned; but who was to give a title? How Mr. Wyld managed we cannot tell, we could not see security enough to spend five pounds on it, though he risked the whole "world."

Winter Flowering Pelargoniums.—To produce flowers of the pelargonium during winter and early spring, the following treatment is recommended:—When the plants have done flowering, they are headed down, at different times, to secure a succession of bloom the next season. When the plants have produced young shoots an inch long, the soil should be shaken from the roots, and they should be repotted into their flowering-pots, the size of which will depend on the size of the plants, but should be as small as the roots can be got into without crowding. The young shoots should not be topped. By this treatment they will usually be knotted for bloom by the end of November, when they may be taken, in succession, into the flower forcing-house, or other structure where a genial warmth is kept up. There is no advantage in placing them in heat before the blooming buds are formed; on the contrary, this is often the cause of failure. If properly managed, the pelargonium will bear much more heat than is usually supposed.

Perennials in pots, such as the Chimney Campanula, or Campanulla pyramidalis, some of the Delphiniums, Petunias, Verbenas, in short all kinds, hardy, half-hardy, and tender, want considerable care and watch-

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fulness during the hot weather of August. A few hours' neglect destroys the blooms, and this neglect much increased would destroy the plants themselves. Those in the open ground must undergo the same routine, except that watering need not be so frequent. They must, if slender, be tied up to stakes; decayed stems, leaves, and branches, must be cut off. Those which are out of bloom may be propagated by parting the roots, and this may be done in two ways. If the borders in which they are growing are to remain in the same style, the best mode of doing this is to cut off with the spade portions of the patch which the plant forms all round it, or on one side more than another, or at the back or front, as the case may be, so as to leave the plant in the ground perfectly undisturbed, and no larger than it is wanted. Digging out these pieces leaves holes, which must be filled up with fresh soil. The portions so cut away may be divided into moderately small pieces, and be planted in nursery beds to grow into good-sized plants. Among the subjects to be so propagated may be mentioned the Scarlet Lychnis, Gentianelly, the several Campanulas, Daisies, Polyanthuses, Primroses, almost all herbaceous plants, the Michaelmas Daises or Asters of all kinds, Peonies, &c. Where it is desirable to make the largest quantity of stock, the whole plant is better dug up, and divided into as many pieces as can be made with a portion of root to them, and planted in a shady border, six inches apart, there to grow and establish themselves.

Protecting Potted Plants.—The different modes of protecting potted plants are, first, to plunge their pots to the rim, and let them take their chances of the open weather; this will do for most things that are nearly hardy, and that would be safe planted in the open ground. Secondly, to do this, provide hoops and mats to cover them in hard weather and shade them from the burning sun, which is often felt in the early spring months; this will do for plants yet more tender. Thirdly, to place them in cold pits, built up with turves to form the walls, and glass lights to cover them; this with proper attention will do for many greenhouse plants. Fourthly, to place them in regularly built brick pits, but with no provision for artificial heat in the event of hard weather, it being quite sufficient to shut out the frost, and shade them from the hot sun. These pits are of various constructions, according to the height of the plants to be protected; camellias, azelia indica, epacris, heaths, and many other plants, are sheltered there by thousands, and, except covering with mats or cloths, have none but the natural warmth, or rather the warmth of the earth, which is kept in by means of proper covering, increased in thickness during the hardest weather; and no method that has been devised answers better. Fifthly, we come to pits warmed by artificial means when necessary, and greenhouses, which are only on a larger scale; but even these should be rarely heated for ordinary greenhouse plants, for the plants thrive much better without fire than with it. The less excitement a plant has in winter time the better. Most exotics are used to more uniform climates than our own; they may have even a longer winter than ours to contend with; but when the fine weather comes, they have not the alternations of heat and cold peculiar to our climate, and therefore it is these changes that we have to guard against. But, although we have mentioned some of the most common means of protecting potted plants,

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we must not omit to notice a more rude way of treating them resorted to by those who have not the means to provide a better method. We have seen a hole dug in the highest part of the ground, two feet deep, three feet wide, and as long as the plants would occupy, the plants set in the bottom of this hole, and hurdles placed over them, upon which some sort of covering was put at night, and taken off in the morning, unless it happened to be frosty, when, of course, it would be kept on; and we have known even geraniums, which we consider among the most troublesome things to manage, go through the winter well. We could not say much for the colour of the foliage after a hard winter, but they have been cut back pretty freely, and started into growth in the spring, and very soon recovered all the health and vigour of better-used plants.

A Simple Rosary.—The Rose is now made such a distinguishing feature in all well-appointed gardens, that it may be worth considering how it can be best displayed to advantage. The most simple and effective way that we know of is, three or four rows on each side of a path, standards, half standards, and dwarf, each row a foot lower or higher than the next; say, the front row is dwarf, the second worked one foot high, the third two feet, the fourth three feet, and, if another, the fifth four feet. When we say worked a foot high, it must be remembered that the dwarfs, though only a foot from the ground to the top, hide the foot stems of the next row, and the heads of these hide the stems of the third, for the heads may be well calculated at one foot: when the whole are in flower it is a bank of Roses; and we have never seen, among all the rose gardens and rosaries in the country, anything more effective. We have seen scores of elaborately worked arches, pillars, and fancy frames on which to grow roses, from the gigantic circular ironwork (like a gasometer-frame) at the Crystal Palace. to the doorway of a summer-house, but never saw anything half so effective as a ten-feet border of roses, whose heads nearly touched each other, and formed, as it were, a solid bank of that beautiful family, in endless variety and full bloom, and this on the left hand as well as the right. There are plants that require ornament, plants whose merit is in the form they can be made to assume; but the Rose is one of the plants which is perfect in itself; it is profanation to make it look artificial; if it be a climber, let it go up a wall, or a cottage front, or over some inartificial, rudely-constructed supports, and cover an avenue; but it certainly never looks so bad, so out of place, as when constrained to help hiding a mechanical arch, or stick up like a pole. Let it cling to the trunk of a tree, or trail on the ground; but save it, oh, save it from being bound hand and foot to the iron birdcage, or the wiry sides of a cockney rosary. No matter how the rose is disposed of, in beds, borders, grass plots, or on walls, on the house front, or the gate-post, or climbing the roof of a thatched cottage, it is a gem, and needs no ornamental nor mechanical assistance. All we shall impress on the mind of the rose-grower is, to buy none but continuous blooming varieties; have a dozen of a sort rather than admit such as bloom a month, and cumber the garden eleven months without showing a flower; go to a good man, tell him what you want, and take what he recommends; put the responsibility of a continuous bloom upon him, and tell him you would sooner have a score of one sort than see the head of his rose-trees without a bloom.

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A CHAPTER ON PROPAGATION BY CUTTINGS.

THERE is hardly a cottager who grows a few window-plants, who is not quite *au fait* at raising plants from slips. The fact is, that some plants are so readily struck, that we are apt to fancy everything is to be equally obedient to our wishes; and yet a man may expend half his life in learning this branch of propagation. Many plants will shoot out branches from the hard wood, and old-fashioned amateur cultivators of a few greenhouse plants actually wait for such shoots, and consider them lucky opportunities of obtaining new plants: their custom is, when their favourite slip, as they call it, is large enough, to tear it down by the heel, and, without any kind of preparation, to put it in the centre of a small pot, and treat it forthwith as a young plant—and many things require no more persuasion to root, but immediately supply themselves with fibres, and constitute themselves plants. This is no isolated race of amateur gardeners, but includes nine of every ten who are choice of their few plants, and contrive, by attention to the main points of watering and shifting, to grow them healthy for many years, but whose collections are, of course, limited. No lady would be without her myrtle, and slips of this will root anywhere and anyhow. Then there are the old-fashioned geraniums—the oak-leaf, the peppermint, the horse-shoe, the ivy-leaf, and others prized for the scent of their foliage—which strike instantly from slips; and, of course, anything that would root easily so, would be a very short time rooting from prepared cuttings. The old Acacia armata, another cottage favourite, and the fuchsia, when there were but two or three known, and that a fuchsia was a fuchsia was all that any moderate amateur comprehended,—was quite a star. Mesembryanthemums, and two or three other succulents, formed a portion of the better and more extensive collections; but all these readily struck root, if a shoot was taken near the bottom; and this was the extent of the general knowledge on the subject of propagation. Such people never dreamed of the wholesale propagation that is going on at nurseries, nor did they think of using a knife to prepare the base of a cutting. If there were branches broken by the wind they were stuck in a pot, and as the fracture was generally where the branch joined the old wood, it rooted much oftener than it failed; but all this, simple as it seemed, gave very little notion of cuttings. The most easily-rooted subjects are generally hastened by applying proper means; and although many of them will strike in a common border, if properly prepared, they would root much sooner if covered with a hand-

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glass, and still more readily if hastened by a little bottom heat. One of the first objects is to get proper cuttings—that is to say, cuttings of wood, as it is called, in a proper state. Some things strike best with the wood in a young growing state; others require that the wood should have done its growth for the season, and become nearly ripe; some strike from the hard wood only; some will only root in sand, others in wet moss; but there are certain rules which apply to all, and, if not absolutely a necessary condition, tend to hasten the rooting of the most free strikers. Every morsel of some plants seems to bear the rudiments of roots: the gloxiana will strike and form plants from leaves only; the clippings of carnation leaves will often strike root as they lie on the surface of the soil, although we never knew one to form a plant. Many succulents are so free to root, that when pieces have been accidentally left on the tan-bed, or carelessly left on the soil on a pot, they push roots from their sides or ends directly into the earth, and would, if left, soon become perfect plants; other things emit roots at their joints, without any other encouragement than the damp the atmosphere affords. The vine frequently does this, the balsam commonly; the verbena will trail along the ground, rooting at the base of every leaf, and a single elongated shoot may often be cut up into many plants. But there are other plants so obstinate, that they require all the skill of an experienced propagator, who could tell us of his many failures before he succeeded to his mind. It is, in fact, so important a branch of the profession, that scores of good gardeners would be totally incapable of undertaking a place; and "Wanted: a propagator" is as distinct from "Wanted: a gardener," at the head of an advertisement for a man in that capacity, as "Wanted: a bookkeeper." The first lessons in propagating by cuttings would be well given upon simple and freely-rooting plants. To increase such plants, let the operator be shown first that every leaf is at what is called a joint, and that as roots emanate from joints, the first step after the cuttings are off the plant, is to cut the lower end clean up to the base of a leaf. Next, as the lower leaf would be inconvenient for setting in the soil, the leaf should be cut off; not that this is a necessary condition, except for the convenience, because many think the leaf would assist the rooting; and it is quite certain that, but for the inconvenience, it would be just as well on. The leaf, however, is always in the way, especially if a number are to be placed in the same pot; the cutting of the lower leaves off, therefore, as high up as the stem is to be set in the soil is a matter of course.

The next point to attend to is, to have the cutting made of the right length. One joint above the soil, and one below it, are sufficient in many things; a branch of geranium, for instance, may have

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half-a-dozen joints; these might be divided into three proper cuttings, each with its joint at the base under the soil, and one joint above the soil. Cuttings of subjects with closer leaves,—such as pinks, heaths, acacias, diosmos, and many others,—require several joints below, and the same above; and if the leaves were not, for a certain distance, to be taken off, such cutting could never be properly planted in the pot, so as to have the soil or sand close all the way up to the stem—and without this cuttings cannot well root; the leaves would in some cases prevent their being made firm, or by spreading out would actually lift up the cuttings.

Among the most efficacious plans that we have adopted, we think the following practice has been successful in the greatest number of cases—that is to say, it has answered with the greatest number of plants; not that so much trouble or such nice management is absolutely required in a half or a quarter of the subjects, but while it is necessary, or at least efficacious, with a great number of plants, it certainly hastens the rootings of even the most common and free-rooting subjects.

No matter whether it be the epacris acacia, heath, correa, camellia, gardenia, ixora, azalea,—in short, no matter whether stove, greenhouse, frame, or hardy subject, let a pot be filled one-third full of common drainage crocks, or nearly so; a bit of moss covering the drainage, though not absolutely necessary, prevents the soil from running down among it, and makes the water run freely through, without washing down the compost. On this put the soil, which should be half loam from rotted turves, and half sandy peat with the fibre in it, well mixed, and rubbed through a very coarse sieve; the pot should be filled within half-an-inch of the top, and the pot should be struck on the table, so as to settle it down a little; but more should be put in, to make it at the finish level, and half-an-inch below the rim; this half-inch is to be filled to the top, perfectly level with the edge of the pot, and then saturated with water, till it runs through the soil, and out at the bottom. Silver sand is the only proper material for this, and it should be perfectly clean. The pot is then fit for the reception of your cuttings, the size of it having been selected as appropriate as possible for the cuttings it is to receive.

Whatever be the nature of the cuttings, the preparation must be similar in many respects. First, consider that you want as little above the soil as will conveniently form the plant,—that is, ensure a growth. Generally speaking, two joints with the growing heart is sufficient in long-leaved subjects, such as dahlias, gardenias, ixoras, camellias, neriums, and such like; and for small-leaved subjects, such as heaths, half-an-inch above and half-an-inch below

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is sufficient. Let the bottoms of these cuttings be taken off close under a joint or leaf, and, with a sharp knife, take off the leaves full half-an-inch high; these cuttings should be sorted, so that each pot may be filled with but one family of plants, and, when you have enough, only one variety.

Next take a bell-glass that goes well inside the rim, and make a mark with it in the sand; then, the sand being saturated with water, you may take the cuttings one by one and press into the wet sand to the bottom of it, so as just to press but not to enter the compost beneath it. When you have put in all that you intend, let the surface of the sand be watered with a fine rose, to settle it well about the stems, and cover with the glass, which must be gently pressed into the sand, so that it shuts out the external air. If the pot be now plunged into a tan-bed, or any other medium that yields a moderate bottom heat, and the whole be shaded from the sun, and if the glasses are removed in the morning, and the inside of the glass dried, many kinds of cuttings will be rooted in a few days. But water must be administered freely, and the glasses must not be kept off long together for the first few days, and the general warmth of the bed must not be allowed to decline. If any of the cuttings should damp off from any oversight in the preparation, let such as damp off or fail be at once removed, that the infection may not reach the others.

In this way some of the most delicate and difficult things to propagate by cuttings may be rooted with a tolerable degree of certainty; but if we were propagating camellias in large quantities, we should not cover them with glasses, but put the pots with the cuttings as thick as we could stick them in, under the glass of a common hot-bed, and take especial care that the soil in the pots did not get too dry. Very few of them would miss if they were cut properly, and as they began to grow we should give more air, until we could remove them to a cold frame, and soon after pot them off in small pots, one plant in each. The more hardy the plant the less bottom heat there should be; but it is certain, that by keeping the roots warmer than the tops, the growth there is encouraged. Geraniums and many other plants will strike in a common border under a hand-glass, but the plan we have mentioned will generally succeed with the most delicate and the most obstinate of hard-wooded exotics, as well as with the ordinary free-growing plants. Rapid growing climbers of the perennial or hard-wooded kinds will generally strike very freely with one joint under ground and one above; vines especially strike so easily without any other management than merely cutting them at a joint, that on one occasion we remember to have used the cuttings of a vine to mark the spots

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where we had sown annuals, and at the growing time found ourselves possessed of an immense quantity of healthy plants, which, had we cared for them, would have been of consequence from their great number. The willow is just as free, for it was once a common practice in country cottage gardens to get willow stakes, and bend them by sticking both ends into the ground, and although there were no pains even taken in cutting them at joints, both ends would root, and the growth at every joint formed a complete willow hedge; this was a very usual fence between two gardens. Currant and gooseberry bushes will strike by merely cutting the bottom up to the joint, and with six or eight-inch lengths, half being inserted in the ground, and half exposed, scarcely one in fifty would miss if the ground were kept moist. Roses of the smooth-barked kind strike very freely; but in all these apparently simple processes there is some care required in the preparation of the cuttings. For instance, we must cut close up to the joint, so as just to reach the solid part, if it be anything with pith in the centre, but we must not go beyond it. If there be any of the hollow or spongy wood left on, or the joint itself is cut into, there is great danger of failure, for the roots emanate from the joint, and nowhere else, and by exposing that to immediate contact with the soil, and leaving no useless wood below it, the process is greatly aided. As to vines, roses, currants, gooseberries, camellias, geraniums, and indeed, most free-growing shrubs, trees, and plants, the whole length of the last year's wood may be cut into lengths, with a joint or more below and one above, and will do well, and in almost all cases the last year's shoot will strike with care, though with many more difficult subjects the cutting must be taken off at the heel as soon as it is long enough. The common cabbage, after the main head has been cut off, will send out shoots, and these, if taken off and planted as soon as there is stem enough to insert in the ground, and it has begun to form a heel, will strike, and form as good cabbages as the parents, but smaller; these, however, would be required to be taken off at the heel, and almost with a bit of the stump, but certainly the whole of the shoot; we mention this rather to show the nature of plants, than to recommend it as a practice.

The process of rooting is much longer in some plants than others, and the difficulty therefore consists in maintaining the shoot or cutting alive while it is going on, until it is able to support itself, and it is in the length of time a thing takes to root, that all the difficulty consists. In some cases the difficulty amounts almost to prohibition, and it is in these that we resort to layering, that by continuing just enough of the parent support to prevent the part from dying, we may give the intended new plant a year, or at least

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a season, to do its work in, whereas it would require the utmost ingenuity, skill, and attention, so to preserve the life of a cutting as to enable it to root. It is said of the mulberry-tree, that if a healthy branch be cut off at the heel, and be planted two or three feet in the ground, it will root and become a tree; and there are records of such being used for posts, or some other purpose, having become fine bearing trees; but these are exceptions to the general fate, because we have tried this, as well as many other experiments; and have failed; though we have not the least reason to doubt that where the soil has been congenial, the wood healthy, and circumstances of moisture, station, and perhaps climate favourable, these large branches or limbs have been known to strike root and to flourish afterwards. We do not recommend the experiment, because we think it may cause a loss of time if depended on for a tree, and if not depended on it may as well be let alone. We certainly have known a limb of the mulberry that was lying on the ground grow all along the upper surface, and when removed it was found to have struck rook in many places on the under side. It appears to us as a general principle, that the rooting of cuttings is invariably promoted by the soil they are in being of a higher temperature than the air above; hence, autumn is always the best time to insert out-of-door cuttings,—the earth has had all the warmth of summer, and is of a higher temperature than the atmosphere in general. The same cuttings that do well in autumn will not do so well in spring, for then the earth has the chill of winter in it, and the general atmosphere is for a long time warmer than the soil. The cuttings first form a sort of callus, which is like a spongy swelling at the base, and they take nourishment from this before the spongioles or fibres appear. It is this first process that is hastened by autumnal insertion, while the plant above is totally at rest, and when the upper portion is excited, the roots grow as fast as the spring buds and leaves require their aid. When cuttings of hard-woded plants are apparently at rest above the soil, we may frequently observe in the slowly growing kinds that the bottom has swelled into a lump; a sure sign that it is doing well, although it may even then take months to root: indeed the cuttings will frequently grow with only this callus to support them for a time, and if they are neglected at this critical period they will assuredly perish.

As soon as cuttings which are generally put too close together in pots to grow long in health, are fairly rooted, they should be carefully potted into single pots, and treated until they are established in their new abode with more than ordinary care; they should not be exposed to the air or sun at first, and above all things they should be well supplied with moisture. Out of door subjects, and especially

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of the deciduous kind, should be treated as the parent plants are. They must not, for instance, be removed until the leaves fall, and they may then be planted out at larger distances to grow into strength, or be placed where they are to remain. China roses—with which we class, by the way, all the smooth-barked kinds, for they all strike freely—may, towards the autumn, be put very thickly into a pot or pan, and plunged into an old hot-bed without covering, except from actual frost; or they may be inserted very close together in beds in the open ground, and have no other care than being covered with litter in very severe weather, and they will for the most part succeed—presuming that the rule for cutting up carefully to a joint, but not into it, and having one joint above the soil, has been attended to. No matter how long a shoot may be, every two joints will make a good cutting. These, when rooted, must be planted out with plenty of room to grow; but they must be well rooted and growing before they are moved. If this has been delayed till the spring, they must have a little gentle bottom heat to excite early rooting; because the plant is in a more active state, and would grow and exhaust the sap within it before the base became callused and produced any supply. The growth, therefore, should be checked above and excited below, that the process may be hastened. In roses, however, as in many or most other deciduous and half-deciduous subjects, the plant soon roots so completely that there is no waste or exhaustion of the sap, and there is time given for the formation, first of the callus, and secondly of the roots. We have tried a hand-glass full of rose-cuttings of various kinds stuck into the soil in the open garden in November, and we have tried another of the same kinds similarly treated in February; we took all the necessary pain to give proper moisture in both instances; in April our spring cuttings were all growing fast, and the autumn ones had not stirred. Some of our friends, seeing them at this time, tried hard to persuade us that we had mistaken the seasons and reversed them. Another month, and the buds of the autumn glass-full began to grow, and the shoots of the spring ones had died. This explained in itself the cause of failure; the spring shoots exhausted the cuttings before they could move at the bottom, and though they lived awhile upon the sap within them, they lived, as a nosegay lives in water, simply on their own means, which water prevents from drying up, as the moist earth did that of the cuttings; but the growth exhausted it. The cuttings of every succulent subject, such as the green wood of the geranium, many of the cactus, euphorbia, and cereus families, and all juicy plants in general, are the better for drying a day before they are inserted. The gloxinia and achimenes, the gesnera, and some others, are capable of pro-

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pagation in a similar manner; the cuttings of this are merely a leaf with a bit of its foot-stalk; there is no joint required. Every part of the plant apears vital; but they require bottom heat. The Hoya carnosa, a hard, fleshy-leaved plant, very common in greenhouses, is equally curious; a leaf is the cutting, and we have known the bits of leaves, after the training and trimming of a plant, carelessly left in the pot, to be all struck into the soil; but these are all exceptions to the thousands of plants that require, for healthy propagation, a joint for the base and a joint above the soil for the growth.

Much discussion was raised some time since, in the periodicals, about the possibility of general propagation by leaves. It was assumed, that the camellia japonica and the orange tribe had been so propagated; and, therefore, the only thing to learn was how to accomplish it. We dissent, however, from admitting the propriety of these speculative operations; unless changes can be rendered profitable or advantageous, they are of little value. Every leaf of the orange and camellia covers a bud, and we know we can form a plant of a bud and a leaf. Leaves are only used as the means of propagation in such plants as are of a different structure, and which afford no readier means. Upon the whole, then, we may conclude, that there are several conditions which apply generally to the propagation of plants by cuttings:—

First.—The more tender the fibres and the more delicate the plant, the more light and free must be the soil to strike them in.

Second.—Hence, silver sand is one of the best mediums with which to surround the stem, and exclude the atmosphere from the base.

Third.—But as there is no sustenance to be derived from sand, there should be a proper soil into which a cutting can immediately send its roots in search of the food it requires.

Fourth.—That the base should in every case be excited more than the portion above the soil.

Fifth.—Therefore, bottom heat in a morderate or a large degree, according to the temperature above, should be supplied.

Sixth.—That where cuttings have leaves, as in evergreens, evaporation tends to exhaust the sap, and should be prevented as much as possible.

Seventh.—Therefore, hand or bell glasses are necessary to cover all such cuttings as are taken from growing or evergreen plants.

Eighth.—And, as the sun would greatly accelerate evaporation, cuttings should invariably be shaded.

Ninth.—That as deciduous plants have a period of rest, and that is of some months' duration, the fall of the leaf, which

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indicates the commencement of this rest, is the proper time to take cuttings.

Tenth.—And that, besides, the autumn finds the ground in the best state to give the advantage of a higher temperature for its base than the top experiences, and this condition preponderates through the whole winter months, so that the base of the cutting is prepared to support the spring buds as soon as the genial weather excites to growth.

Of course, we have presumed that the cuttings have been prepared with proper care as directed; and though we have stated the conditions required by the most delicate, the more robust will root in common soil, and succeed with much rougher treatment. This is not the first time we have broached the subject, but we believe it cannot be too widely circulated.

PELARGONIUMS AT SHOWS.

THESE beautiful subjects are now exhibited after a fashion which destroys their claim to floral honours, and extinguishes the properties by which they are judged as seedlings. Take any one of the specimens which are loaded with blooms they cannot support, and propped with sticks, and you will easily see that there is hardly one perfect truss; some have six petals instead of five, some scarcely two blooms alike, very few with perfect markings, and perhaps not a single truss that possesses the brilliancy, the form, or the size that in the first single plant induced the judges to select it for cultivation. How can it be otherwise? the plant has been unnaturally excited into growth, to be checked and grown again, and by constant stopping and exciting, driven out into innumerable shoots, until they are too weak to sustain even the miserable starveling blooms that have to make up in number for the loss of all claim to properties; and from a noble florists' flower it has degenerated to a large surface of distorted blooms. Well, for the mere loungers at floral fêtes, all this may do, they admire the masses of pimping blossoms, and they do not condescend to look sideways at the hundreds of props, or they might also admire the ingenuity which is made to compensate for professional ignorance. The most flowers and sticks win the approbation of the judges; strength and beauty and symmetry go for nothing. The natural habit of the plant must be destroyed before the grower can take a prize, and the old laws of the true florist, which allow of no artificial support, are abandoned, to make excuses for the gardener's incapacity. That there is a disposition to carry the system out, wherever the new and namby-pamby school takes the lead, is too evident. The showing of pinks, picotees, and carnations, on cards, is another of the expedients to conceal the cultivator's blundering, and make room for those flowers that will not support themselves. The exhibition of roses, with a bundle of laths to fasten the weakly branches in the position that suits the division of the flowers, some bent

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down almost to the pot, and curled about in all directions, is simply because the gardener is ignorant of his profession, and cannot prune his plants right, nor grow them strong. Fuchsias are subject to the same cruel torture, although if well grown they are able to sustain themselves in the most graceful and elegant position. To return, however, to our subject. Why should there not be a Geranium Society to encourage the natural growth of that most beautiful flower? The cultivation of this plant in a natural way is very simple, but it requires taste in the grower, and attention to the wants of the plant. The main object is to produce its flowers perfect, and to do this there must not be too many. The florist might as well let the auricula and the polyanthus spread in the pot, and throw up a dozen trusses, and expect perfect flowers, as the geranium growers make monster plants with hundreds of false blooms. Let prizes be given for the best flowers, it will then be found that cuttings struck in July, grown healthy without fire heat, and only stopped once or twice, will produce flowers in their true character. Nay, it is not quite certain whether a single truss on a plant not stopped at all, placed beside one of the monsters, would not completely throw the flower grower on the mass of scaffolding into the shade. To see a geranium possessed of good properties degraded to a jumble of imperfect blossoms is vexing to the true florist, and some effort should be made by the provincial horticultural societies to bring back the plant to its natural state, and its blooms to its natural beauty. Place one of the distorted monsters fairly on its bottom, and look at the wretched figure it would make with its hundred wooden legs. Observe that not a vestige of the natural plant is left, and yet they call it a plant-growing. Why the best appellation for it would gardening run mad. Here the finical ladies and gentlemen who like artificial flowers can easily admire the jumble of petals that cover the whole surface of a plant. But show us a well-grown symmetrical plant, with its branches and foliage in their proper places, with health and strength, and a proper share of flowers, and there is something to be delighted with. Above all things avoid crowding, avoid unnatural excitement, avoid artificial heat, except to keep out frost; abjure sticks and ties, and let us have the full development of the real properties in whatever blooms are shown. If we could influence the employers of gardeners, they should not permit a single support to plants that can be grown without it, for it is certain that the time wasted by a gardener in propping, and torturing, and tying, is fatal to his proper business.

MANURES RECOMMENDED IN PRACTICAL GARDENING.

Ground, in a state of nature, may be rich and require nothing, or poor and want everything that can be done for it; but there are certain manures that cannot injure by excess, while others may be useless or mischievous. Among the most certain and useful may be reckoned—

Vegetable Mould, or Decayed Vegetables.—This comprises all the waste of a garden, the leaves swept up by the road-side, and from under all the trees on the estate, or any neighbouring forest. This and

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other vegetable matter, laid in heaps to rot, may be laid on the ground, or dug in with impunity, for it is simply returning to the earth what has been taken from it, with certain perfectly innocent or useful additions, taken from the atmosphere—for it would be idle to suppose that the plants, from a daisy to an oak, lived entirely on what has been withdrawn from the soil. Vegetable manure, therefore, is decidedly a safe and useful dressing, and it would be difficult to apply too much. Many dig into the ground all the waste of the crop they are taking off. There is but one objection to this immediate application, the certainty that all manner of insect-eggs must be abundant in the waste leaves, and that many may be thus committed to the soil, to become very shortly enormous plagues. By laying the waste together to rot with or without the aid of lime or other means to hasten decomposition, the great mass of these eggs is destroyed, and the result is a far cleaner and better compost to add to the soil. But there are some estates whereon the leaves and waste form an enormous bulk; and in such case, the burning of it, and the spreading of the ashes, will be found equally advantageous. Leaves laid up, and allowed to rot into mould, become valuable; they ought, therefore, to be collected and laid by, year after year. They make fine mould for potting. Cabbage-leaves, and the trimmings and waste of all vegetables, should be thrown in a hole; and if they become at all offensive, throw some lime over them, and water it. The heap will be rendered perfectly harmless, and that forms a manure that may be used in any quantity, for decaying vegetable returns to the earth just what the earth has given. The next useful and harmless manure is—

NEATS AND SHEEP DUNG.—These animals living exclusively on vegetable food, their manure is of the highest importance, and cannot be applied in excess; for the worst that comes of it may be set down as unnecessary trouble, where such dressing is plentiful. In the application, this may be green or rotted, but the latter is the most easily used. Neats-dung collected dry from the forests, commons, and pastures, forms a valuable manure for particular subjects, and should be sought and procured, every opportunity. Sheep-dung forms an excellent liquid manure; by putting a barrowful into about a hogshead of water, you are enabled to give a good dressing to plants that could not be reached in any other way; this may be picked up on commons and wastes.

HORSE OR STABLE DUNG is valuable: no manure gives more solid advantage; that is to say, no manure gives better heart to ground for general purposes, whether ploughed or dug in, as it comes from the stable, or allowed to rot first. The application of manure of this kind may be by digging it in, a spit deep, after spreading it evenly on the surface; or by forking it in, which will mix it with the top spit more equally. The dung from hot-beds, used for melons, cucumbers, and other early productions, makes excellent manure at the end of the season; and those who consider the expense of hot stable-dung, for this purpose, should recollect that the value of it after the heat is gone, and the dung rotted, is as great as it was while hot and in order for the beds.

PIGS-DUNG.—The coarsest and least valuable dung is that of pigs, which should be well decomposed before using, although it is more often taken from the sty to the ground, and dug in raw. The best mode of

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applying this strong and offensive dressing is to throw it to a heap, and then spread it out half-a-foot thick, and throw over it a layer of peat-earth, road-sand, or common soil, as thick as it can be afforded,—say three inches. When the sties and pig-yard are again cleaned out, throw another layer of pig-dung, and on that another layer of soil, so repeating this every-time, and leaving the heap as long as possible, for the more it is rotted the better. The whole heap then becomes an excellent compost, or dressing, for any ground.

Droppings of Animals from the road are collected by children in many parts of the country, and may be had cheap. The value of this, as a fertilizer, is unquestionable, and a heap of it is a great acquisition. The cleaner it is preserved the better. It forms excellent top-dressings for many things.

Night-soil is a most remarkable manure, although little used of late years in England, compared with its application in other countries. This should, however, be as carefully used as guano; for, if applied in too large a quantity, and unmixed, it is dangerous.

Soot is highly valuable. It is not only nutritious, but very destructive to many kinds of vermin. This is generally applied by sowing on the surface, and letting it wash in with the rain. Wood-ashes, also, should be applied in the same way. These two are excellent torments, if not exterminators, of the numerous tribes of bots, or grubs, that so damage a crop, and especially obnoxious to the grub which causes clubbing in the cabbage-tribe.

Bones should be collected by all available means, and broken before use; nothing does more good to land. They should be bruised with a hammer into small pieces. They may be mixed with any compost, but should be pretty evenly distributed; because whatever comes in contact with them will show the superiority of growth in a very short time. Bones crushed, or ground to powder, are a favourite manure. If the effect is to be immediate, the powder is the better, because it more rapidly amalgamates with the soil; but if permanent, the bruising, or using them coarse, makes them last much longer. Bones are now such an article of commerce for farming and gardening purposes, that they are ground at mills for the purpose, and shamefully adulterated; but they may be purchased broken, or ground to any size, for by means of sieves they are easily separated; and we prefer very much to have them with the fine powder taken out. When, however, they are broken by ourselves, we know there is nothing wrong about them, and the size may be just what we please. We do not like lumps larger than horse-beans; and all that come smaller give instant effect. Very little of this dress goes a great way, and there is nothing pernicious in it. They should either be mixed with something that is to be spread all over, or sown by hand all over the surface, to be forked in a very little way.

Chalk is a good dressing to poor lands, and therefore should, if possible, be provided among other subjects, to be handy in the manure ground. This may be spread over the surface, and be mixed with the soil pretty evenly, but it may lie on the surface for a time. Burning it, to make lime of it, is well worth the trouble, for the benefits are sooner felt, and it is sooner mixed, because it falls into a powder with the mere action of the

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atmosphere. Lime, in moderate quantity, is of great use in the destruction or discouragement of vermin, especially slugs, snails, and grubs, underground.

SOAP-ASH is a very common dressing for land, especially if poor and foul. It is destructive of the grub, and has rarely any bad effect on any soil, though of less use on some than other land. It consists of the refuse of the soap-boilers, and is a strong alkali, used a good deal in some districts. We believe there is hardly any refuse of any kind that might not be made available, if applied moderately and properly. Alkalis generally have the best possible effect in destroying vermin; but they must be moderately used, or they may be too strong for the well-being of vegetable as well as animal life: and wood-ashes are of great service spread on the ground and dug in.

GUANO is so much an article of commerce, that all we need say of that part which relates to its real or supposed origin is that it is the dung of sea-fowl, accumulated during ages, and that it is imported at a cost varying from £9 to £11 per ton. It possesses high fertilizing qualities, is applied to the ground many different ways, and is best applied when a shower of rain is not far off, that it may be washed into the land. Of the different methods of applying it, there are two that we recommend before all others for a garden. The first is, to mix it with four or five times its quantity of road-sand, or sifted peat, or other very light soil, and sow it evenly all over the surface. The other is, to dissolve it in water, and water the whole surface. The best way to mix it is to lay four or five inches of the soil level on a stone floor or pavement, and, on this, put about half or three-quarters of an inch of guano, then another layer of soil like the first, and another three-quarters of an inch of guano, till you have put the quantity you mean to sow; putting four or five inches of soil on the top. Let this lie together till it is wanted. With regard to quantity, two pounds weight to a square rod of ground, that is to say, sixteen feet and a half each way; therefore, sow the quantity of composition that contains two pounds of guano. But we need hardly say that when these layers of guano and soil have lain together a few weeks, chop it down in thin slices, and turn it well, to thoroughly mix it all together. Take advantage of showery weather, if you can, that it may not lay and dry on the surface, and in a day or two sow your crops. When you dissolve it in water, you can tell the quantity of water it will take to water all the space and dissolve the quantity of guano required in it; stirring it every day for three days, and water the ground with it. These two are the most easy methods we know of applying guano. Farmers use the same means, but, instead of sowing the mixture broadcast, they drill it into the ground when they are going to sow. They mix it with other dressings, and do not rely on that alone. They occasionally top dress with it in a mixture of some sort: but we do not use it ourselves in a garden; we prefer the rotted dung from the stable-dung hotbeds, which is half rotted the first year, and is ready for all sorts of use at the end of two. Guano is one of those uncertain things that we should not like to depend on. The quantity put on farming lands, when it is used without other fertilizers, appears to be from two to three hundredweight per acre; but some things would bear more. Onions, for instance, if the ground be well prepared, and two

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pounds weight of guano, or two-and-a-half, be watered in a few days before sowing, and once or twice with plain water afterwards, would thrive wonderfully, if the guano be good. Guano ought to be always mixed with twice or thrice its weight of peat-mould, or sand, or other soil.

MARL is a fattish loam, of use in light lands. It is a sort of half-way stuff between ordinary loam and clay, and of great use in improving sandy soils. It would be of little use to speak of the quantity required for a dressing: it would be extremely difficult to give too much; but "every little helps." The benefit of a very light dressing is felt; and liberal dressing repeated would convert a desert into a garden. As in all other soils, there are many qualities, but all keep the sandy soil of many commons, such as Woking, and all the waste lands south of London will be found good.

SALT is useful to kill vermin when they are out of the way of plants. It is used on gravel walks to kill weeds. The danger is in allowing it to reach the verges or edgings, which, unless you are careful, it will. Some dissolve it in water, and distribute it with a water-pot; and it often runs too far. When salting is resorted to, a dress ought to be drawn the whole length of the walk, on both sides, two or three inches from the edge, because that stops the salt water from reaching the side. Others sow it, and leave the rain to wash it in; but there is more danger in this than in watering, because it gets blown about. Salt is also used on asparagus beds, for that is a marine plant. You may sow as much as will make the beds white, and not risk hurting the plant, while it is known to be a good and profitable dressing.

CHEMICAL MANURES generally are now much used in farming; and some particular experiments with them will form the subject of an Appendix, because they are too varied to be the groundwork of general instructions. The various chemical agents which are now employed in thousands of experiments, by rich farmers, will lead to some general rules for their use.

THE SEWAGE OF LARGE TOWNS will be turned to account. It is worthy of remark, that we have in the United Kingdom sent millions of loads of filth into the various rivers, thus polluting our streams, while we have paid millions for manure of foreign produce, to impoverish us on the one hand, and only half-dressed the land, and thus lessened our crops, on the other. Our business, however, is not to seek the agency of more than we can obtain among ourselves. The Chinese waste nothing: they submit to offensive smells, to menial employments, to incessant disagreeable occupations, in carrying from house to house the very worst refuse, and apply it to their land. And be it remembered, that there was a time when we paid to have our cesspools emptied, and the contents carried away, without our knowing the value, while those so employed removed it to uninhabited places, to convert it to manure and money. Our advancing civilization and cleanliness, so called, led to what people denominated improvements, and sent the filth down the common sewers, to contaminate the waters we were obliged to drink, and poison the fish in our finest streams. In London, the very Thames, which vied with thousands of rivers in the abundance of fish, and the purity of its waters, has become a reeking, moving mass of filth, hardly surpassed by the very

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sewers which for miles are emptying their disgusting contents, labelled or numbered all along its banks, and render putrid and foul the whole mass of waters, on which a thousand boats are carrying their living freights daily, to enjoy the convenience, at the expense of breathing a pestilential atmosphere, not many degrees better than those very nuisances which on a much smaller scale are supposed or pretended to be the cause of a mysterious but fatal malady. Such are our present notions of cleanliness, that we gape at a gnat and swallow a camel. We grumble at every little open gutter that gives off its effluvia to comparatively endless space, and pollute a whole river by directing the filth and offal of two millions of people to three or four miles of the only river we can drink from. Connected with this subject, we can only recommend everybody that has a rod of ground to use it, to appropriate the waste of his own house. Contrive all the means at hand to abate the nuisance, but bury it in his own land, that he may reap the benefit of it. Let not a basin of soap-suds, or of dirty water, go for nothing, but remember that it is all convertible to dressing for the ground, and will confer a real benefit on the garden or the field.

Liquid Manures are made of all the animal dungs; but those which live exclusively on vegetation are the best for general purposes,—cows and oxen, sheep, rabbits, deer, and horses; and all these are the better when the vegetable that it contains is decomposed, because then the whole dissolves. A quarter of a peck of either, when rotted into mould, will render ten gallons of water far better than ordinary water for all garden crops; and when applied to onions, makes an astonishing difference, as may be seen in a very short time, by watering one portion with plain water, and the other with such as we have described.

Manure Tanks.—Everybody should have a tank which would receive all the drainings of manure heaps, and the rains will always occasion a waste of the best juices if this be not done. A tank may be bricked, and in the lowest part of the space occupied by dung-heaps and decaying vegetable matter. These drainings well diluted can be used with the greatest possible advantage in dry hot weather; a soaking of the entire ground, not the mere watering of the plants, being the proper mode of applying it. But wherever this is done, it should be, whether little or much, used with as much water as will moisten the whole space to be watered, so that all may fare alike. In all cases where the liquid manure is used, select the crop which is the most in want of it,—that is, the crop on the poorest ground, or that requires the greatest assistance, and give it all without helping any neighbouring subject. If you are so situated as not to be able to use liquid manure to crops, it is just as efficacious to soak a piece of vacant ground with it, because the strength is there ready for the first thing that is placed there; and it is an excellent plan to soak a space of ground the day previous to sowing anything, especially turnips; for, the ground being in good order, the seed vegetates immediately, and having good hold rarely fails to turn out well. There is nothing better in the summer months than a good soaking of the ground previous to planting or sowing; a plain watering is useful, but liquid manure is better, and when you have none it is worth while to make it, by putting a barrowful of horse droppings, cow dung, or sheep dung, into a hogshead of water the

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day before it is wanted, and stirring it up two or three times. The application should be all over the surface, not hasty enough to let it run away, but gentle enough to let it soak down three or four inches into the ground. Many things are calculated to form a good dressing, but we may in one word say that nothing animal or vegetable should be lost, because everything is serviceable to the ground: old rags, paper, woollen cloth, tanner's waste, gas-tar water, ammoniacal liquor from the gas-works, the waste lime from the gas-works, all and everything capable of decomposing is a dressing for land. In some of these things there must be a little care, in others it matters little how much is put on; of vegetable waste, for instance, you cannot have too much. Pigs-dung and poultry-dung ought to be used carefully; they are strong, and might be used mischievously, but they should be mixed with as much as their own bulk of some useful soil, and be laid together for a time to rot or amalgamate. In this way the strongest manure may be used.

THE MUCK-HEAP is made up of all sorts of waste, and it is impossible to calculate on the strength of the manure it forms, but one thing may be always done to moderate the strength, so as to prevent mischief. The slops from the house and night-soil are always too strong for use, in any quantity, like other manures; and the best way to keep them of moderate strength is to mix with something at the time; road-sand is in general easily obtained, and it would be desirable always to get as much as possible on the premises. Strong slops should always be mixed with as much sand as would absorb it all and lie solid. Soap-suds, vegetable liquor, and ordinary house-drainings, might always be thrown into a tub, to be used as common water in watering plants, while strong slops would require ten times the bulk of plain water to render it useful for immediate application to crops; but those to whom economy is an object, must bear in mind that there is not an atom nor a drop of refuse of any kind to be wasted. The better the ground is manured, the better will it yield, and it behoves us to treasure up everything. If we are near to the neighbourhood of lime, it is a treasure, because by a little mixture of lime the most offensive of all is immediately rendered harmless, and this is so important that it should never be lost sight of. Charcoal has the same effect, and is a good fertilizer.

ROAD-SAND AND SCRAPINGS OF DITCHES.—Road-sand, as it is called, being the scrapings of the roads, and which are readily given up in most places, and sold cheap in others, is invaluable in every kind of soil, no matter how light or heavy; though it is perhaps of the most real service in heavy soils. The scrapings of banks and ditches, although often foul as regards the seeds of weeds they contain, are rich and valuable, and should lie by themselves, to be applied to such crops as will give opportunity of weeding easily. The richness of this generally compensates for the extra trouble it gives. To this heap may be added all the weedings of your garden, because the heap will always be known as a foul one, and the use of it may be confined to such particular quarters as may be conveniently cropped with strong growing subjects, that will admit of hoeing repeatedly; for instance, beet-root, potatoes, savoys, brocoli, and cabbage, being properly grown wide enough apart to keep the hoe at work at all good opportunities, the ground may be a little foul without hurting them;

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whereas with small crops, such as onions, weeds would be very troublesome. Besides, the crops we have mentioned do well on strong ground, and are not easily discommoded with a few intruders, and weeds are easily removed without disturbing the plants.

GOLDEN RULES FOR CULTURE OF FLOWERS.

"THE ANEMONE.—Grow in soil composed of clean friable loam, and perfectly decomposed dung, half-and-half, well mixed, and eighteen inches deep. Draw drills three inches deep, six inches apart, and press the tubers in at the bottom the same distance from each other, lay the earth close, and cover two inches. Plant in October for early blooms, and February for the late ones; but the autumn planted must be protected in severe weather. When up, stir the earth among them, bruising the lumps, and laying the soil close to and among their stems. In very dry weather, water them occasionally, but enough to soak the earth of the whole bed, if you have to repeat it ten times before you accomplish it. When in bloom, shading prolongs the flowering considerably. If you do not want the seed, cutting off the decayed flowers still assists them. If you desire to save seed, tie a bit of bass matting, or put a label to those you want to save from, and save none other. Sow seed, when it ripens, in boxes or pots, and put them in a cold frame. They will be up and growing by the spring. When large enough, plant them out in rows, three inches from each other in the row; and the rows six inches apart, to remain till they bloom. Never allow a single weed to grow among them. It is death to the nearest, and it may be the best. Take up the tubers directly the leaves turn yellow, and dry them in the shade previous to storing them till the next blooming time."

THE CAMELLIA JAPONICA.—Buy your plants of shrubby form, dark green foliage, without any vacancies where leaves have been and dropped. Examine the roots in the whole ball of earth, and if healthy, merely keep them well supplied with water till the bloom has gone by. Now the plant will want to make its growth, and it is time to remove not only ugly rambling branches, but all buds that are in the places where branches are not wanted. Be not afraid of the knife; as you can see all the shoots that would make branches, cut your plant into such form that the new growth will make it handsome. Shift them to larger pots, and keep the plants growing in the greenhouse until they have completed their new branches, which can be seen by the terminal bud. In June they may be set out in the open air, where they may be shaded from the mid-day sun, there they will swell their bloom buds. In September place them in the greenhouse or a cold pit. They only require to be kept from severe frosts and too much wet. Each year requires the same routine of treatment, and no part of the treatment requires more care than the pruning. Plants may be kept smaller and closer, and handsomer, by previously cutting in uncouth branches after blooming. Stocks for grafting should be strong growers; cuttings strike freely; and at two years old are fit to graft. Cut down the stock to an eye within two inches of the soil; cut one side a little to make a flat slope; now cut a piece of wood with the leaf on it,

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and make it fit. But no matter how a graft and a stock are cut so that they properly fit, and the barks meet, they are sure to unite. March grafting is cutting a flat place on the stock, and another flat place on a plant that you want to graft, and tying the two plants together. When these unite, cut off the plant below the joint, and all the stock above the joint, the branch or bud of the plant united is all that must be allowed to grow.

THE RANUNCULUS.—Never let the tubers touch raw dung. Grow them in clean compost-turfs rotted into mould, cow-dung rotted into mould, an equal quantity of each, and eighteen inches of it in the bed. They will grow in any light, rich earth, in well-drained ground; but this may be formed many different ways. Plant them in drills drawn six inches apart, and plant them at the bottom of the drills the same distance from each other. Close the earth well upon the tubers, and let them be covered two inches, but close and solid, though not rammed hard. Plant in October for spring blooms, and February for summer flowering; but the most choice and valuable kinds should be planted in February. When the plants are up, stir the earth, and bruise the lumps, so as to lay it close about the roots and stems. Water in good earnest in dry weather, and shade from the burning sun; saturate the earth of the whole bed, or leave it alone. Partial watering is worse than none; shade the flowers to prolong them; and if they are too numerous for the health of the tuber, cut off all after the first three or four that open. As soon as the leaves turn yellow; take up the tubers, dry them in the shade, and when perfectly dry put them away in their boxes, secured from heat, damp, and frost. Examine the tubers occasionally in their store-boxes, to see that they are not getting damp, or mouldy, or insect of any kind, and brush them all clean. Turn out the soil from the beds to sweeten six weeks before you plant again; but a new bed every year is the best. Sow seed as soon as it is ripe, in pots or pans, and place them in a cold frame or the greenhouse. Sow thinly, but equally, that they may remain in the seed pans the whole first season's growth. When the first leaves decay, take up the little tubers carefully, and in October plant them six inches apart like old tubers. They will bloom stronger than old ones. Throw away, or give away, or get rid of all that are not so good as you have already; or you may save seed from all or them, to get rid of, not to sow. Mark and describe all that are not worth taking care of and naming, that you may secure them at taking up time.

THE POLYANTHUS.—Rich and strong soil is best adapted for this favourite flower. They cannot prosper in compost too light. Two thirds loam, in which the turf has been rotted, cut from a pasture as if for laying down, and one-third decomposed dung, will make a good border. The compost should be a foot thick, and the border shaded from three or four hours of the hottest sun; buy your plants small and well-rooted before October. Plant them nine inches apart in your border or bed, spreading the roots out and gently pressing the soil on them. Water them in well to settle the earth about the roots, and see that they never flag for want of it; and soak the bed well when you water at all. They want no more attention, except to prevent a slug from reaching them, for slugs are destructive to the beauty and health of the plant.

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When they bloom, mark those you intend to save seed from, but take away the dead flowers from those that are not to seed. When the seed pods turn yellow, gather them before they burst, and lay them by in their pods till sowing time, which should be April. When the plants are past bloom they may be parted into as many pieces as you can make, so that a portion of root and a single heart is complete in each. Let these be planted out immediately in the borders or beds where they are to bloom; they will grow fast. Polyanthuses in pots require lighter soil than when out in the borders. This is best altered by adding to the usual soil one fourth of its bulk in turfy peat. Pot them as soon as they have grown into strength after parting; let one fourth of a thirty-two sized pot be drainage. Let the soil be put in highest in the middle, and spread the roots out all round; let the collar of the plant be even with the surface. When plants are newly potted, they may be as high pretty nearly as the edge of the pot; the soil will subside half an inch below, which is the right height for permanent potting. These must be plunged in the border with a hole reaching far below the pot, to let the draining go through, or kept in a frame with a dry bottom, and only covered against severe frosts and easterly winds; at all other times, the glasses off. When the bloom begins to open, take the pots to a sheltered and shaded spot to complete their flowering.

THE CINERARIA.—Procure at blooming time half a dozen of the roundest and prettiest flowers you can find, all different in colour. Place these close together in the greenhouse or in the open air, if the weather be fine. Water carefully, see the drainage all clear, watch for the pods of seed, and save all you can. Sow this directly in pans, in the greenhouse; or you may start in a hot bed or stove if you like. As soon as they have four leaves, prick them out round the edge of pots an inch from each other. When they have outgrown these, pot them in sixty-sized pots, till they fill these small ones with roots; shift them then to forty-eights. Continue the growth in these pots till they bloom, when you may select a dozen better than you can buy, unless you are unlucky. Grow them in half loam from rotted turfs, a fourth turfy peat, and a fourth decomposed cow-dung, or dung from a melon-bed. Use the side-shoots for increasing a favourite variety. If they are rooted, they will grow directly; if not, strike them under a bell-glass.

HINTS FOR GARDENING UNDER GLASS.

THESE, in all probability, will become general, for it is clear that the mere protection of glass, without artificial heat of any kind, will enable us to grow many hard-wooded plants hitherto confined to the greenhouse or warm pits; and it is also obvious that hardy plants will be hastened in their bloom, and preserved in their foliage by no greater protection than a well-built house with thick sheet-glass windows or sashes. There are a few rules to be observed in managing these gardens under glass, for this appears to be the proper name, where the only difference between the covered and the open portion of the garden is the glass which covers a

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part. A few rules may suffice. First, for instance, all the plants should be turned out in the bed or border, or the pot itself plunged, because frost cannot so well go down after roots as it can get through the sides of a pot; next, the greatest possible care must be taken that the windows and doors shut close, and admit no draught; third, that the windows and doors be always shut at sunset in winter-time, so that the heat which has been absorbed all day, shall be shut in all night; fourthly, that whenever the sun is warm, even in the depth of the winter, all the air that can be given should be given. It is impossible, indeed, to give a common greenhouse too much air in mild weather. If there are many top-and-bottom windows, open half of each, so that there is a thorough good air admitted. In dry weather especially, the house should be as open as possible, for the sake of drying it. There are many plants that will succeed better under glass than in the open air, although they are hardy enough to stand exposure—the daphnes, rhododendrons, azaleas (Indian and American), andromedas, camellias, many heaths, acacia arbutus, procera, dentzia scabra, all the liliums, most of the early bulbs; but suppose it to be planted out exactly the same as a bit of fancy garden out of doors, the plants under glass will be forwarder a good deal, so that this would create two distinct seasons if they were plant for plant alike. The hard-wooded Botany Bay plants will often stand a few degrees of frost, but under any circumstances, all the spring bulbs would be in bloom in February, instead of later; and we might walk out of the drawing-room into the garden, under glass, without the least difficulty, and see but the thickness of the glass between us and the most cheerless frost, and snow, with the flowers blooming at our feet. The principal attention required is to the soil with which the beds and borders are filled, and the manner in which the drainage is carried out. There ought to be a clear run of water established, or rather the means of forming one, two, or three ordinary drains, with drain-pipes at the bottom, and stones or bushes to cover them six inches; and these pipes should communicate with an outlet capable of draining away any moisture that may filter into these pipes from the beds and paths, so that however freely you may water your plants or saturate the beds, they will be free of stagnant water. The soil should be loam, from rolled turfs, one half, and good chopped peat earth, the other half. That this may be well mixed, it ought to be placed in a heap and chopped down, and thrown to another heap, and then chopped down again; but however it be done, mixed it must be, and well. The plants should be placed in the soil the same as if it were the open garden, a box edging or a board edging, and smart gravel walks should characterise the ground work. The most effective way of planning the ground work, is a path of two feet six inches, round a bed of six feet wide in the middle, and borders to occupy the space from the path to the walls, or rather the sides and ends, whatever they may be. There will be no great effect the first year without enormous expense, but the second you will have all the advantage of your own growth. If the balls of potted plants are very hard, it may be worth while to soak them, and loosen all the fibres; for you may in vain try to wet a hard ball, the water will run away and soak away, without penetrating the surface, and the plant will become discoloured, weakly, and perhaps defunct. The syringe should be used

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freely, with a fine rose on, and by pumping sharply all over and among the foliage, and especially of the creepers, you will keep the greenfly completely under. Confine your plants as much as you can to evergreens, for you want it cheerful in the winter. Roses, however, you must have, and they will occasionally drop their leaves, still there are some that must be had, and there is nothing more likely to give you a few fugitive flowers at Christmas. We have already said, water freely, but not often, a good sousing with the syringe-pump once a week is better than a garden-pot watering once a day, and besides this it keeps the plants clean and healthy, and saves labour. The plants may be cut in pretty close for effect at first, but some may be easily withdrawn when they begin to crowd each other; unless, which is very desirable, you use your knife freely, and keep all things in a proper shape and perfectly quiet.

HINTS ABOUT THE FLOWER GARDEN.

THE stock of plants for the garden may consist of all the best of the perennials, and a few of the best biennials and annuals. The bulbs for spring blooming are necessarily a considerable time decaying, and if they are potted and plunged into the soil, they can be removed and replaced the instant the bloom decays. There are, however, some plants that are useless as soon as they have done blooming, and may be pulled up and thrown away directly. The principal plants for furnishing a constant succession of flowers may be thus classed:—

Mignonette; insignificant flower, but very odorous; six to twelve inches.

French Marigold; brown, purple, and gold, various shades; one foot to a foot and a half.

Dwarf Larkspurs; blue, white, and pink, of several shades; nine inches to a foot.

Collinsia-bicolor; pretty spike of blue, and white, and yellowish flowers; nine inches to a foot.

Convolvulus Minor; blue-purple, straggling growth; nine inches to a foot.

Nemophila Insignis; bright blue and white, small flowers; six to nine inches.

Erysmium Peroffskianum; bright orange, small pretty plant; six to nine inches.

Double Balsams; scarlet, crimson, purple, and white; one foot to eighteen inches.

Sweet Peas; various purples, and whites, and pinks; two to three feet.

Calliopsis Bicolor; orange and brown; one and a half to two feet.

Lupinus narcus; purple spikes of flower; six to twelve inches.

Phlox Drummondii; dwarf red, purple, and all the shades of them; one foot.

Ten-week Stocks; many colours, from Germany, all but yellow; six to twelve inches.

Virginian Stock; many colours; dwarf.

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China or German Asters; many colours, all but yellow; one foot.

Now these annuals are the most showy in patches, about the size of a thirty-two sized pot, and therefore, if not sown actually on the borders where they are to flower, should be so sown elsewhere as to be easily removed in patches. But the plants, or rather the annuals we have mentioned, are of two classes; one ought to be sown and thinned out, and allowed to stand where they are to flower; the others ought to be sown, and, when large enough, planted out where they are to flower. Of the former, we have the dwarf larkspur, collinsia bicolor, convolvulus minor, lupinus narcus, sweet peas, erysmium peroffskianum, and calliopsis bicolor; of the the latter, French marigold, nemophila insignis, phlox drummondii, ten-week stock, china-aster, and balsam, are the better for the check they receive in planting out. But when there is not room to sow all these things where they are to occupy room all the while they are growing without detriment to the garden, the management is as follows:—Sow as many patches of each as you anticipate you will want in a bed in the back garden or nursery; treat them just the same as you would if they were going to bloom there; thin them properly, not allowing more than sufficient to be together, so as to weaken or to draw one another up. Let them all be within the circle marked by a thirty-two sized pot; and about six strong plants, or from that to eight, even of the smallest subject, is enough. These may be in the nursery-bed until they are far advanced towards showing bloom; when the subjects which they are to succeed are quite exhausted and begin to look untidy, get a box barrow, and, as you wheel it round, take your spade and lift out the whole spadefull of earth with the roots of the plants undisturbed, and lift it into the barrow; do this with all you are removing, whether they are exhausted subjects, dead and done with, or perennials, or bulbs which have not completed their growth. Then, having left in each place the vacancy occasioned by removing a whole spit of earth, carefully water so as to soak the ground all through below the roots, all the patches in the nursery-bed designed for removal to where they are to bloom, and take up each patch with a full spit of earth, so as not to disturb their roots, and remove them to the vacancies you have left in the garden. They may with very little dexterity be so well removed as not in the least to feel the change. The instant they are placed in their positions give the earth all round a complete soaking, and thus settle them in their new places. By these means pots are saved, and there is only a little more trouble. The sowing of those subjects which are to be planted out may be on a slight hot-bed. Hot stable dung a foot high well pressed down, and six inches of good loam at top, will give heat enough for the purpose; and you may either put on a garden frame and light, or hand-glasses; but, in either case, a mat should be thrown over all at night to keep in the heat a little. The seeds may be sown in March on this, not too thickly, otherwise it is a waste. If hand-glasses are used, take care that the seeds are sown within compass of the glasses. If a frame is used, the simplest way of sowing is in drills from front to back, and about six inches from one to the other. The seeds of all the sorts only require to be well covered, and the soil kept rather moist. As soon as they are up, they must have air by tilting the sash or light behind. Moisture must not be forgotten, and the light must be tilted so as

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to give abundance of fresh air as the seedlings advance, otherwise they would be drawn up. As soon as they are large enough to handle, thin them out a little, and put the plants that you pull out in by the side of the row, instead of throwing them away. A few of the balsams may be potted, if you have convenience for them, as they make very pretty pot plants. Here you may give air all mild days, and shut up at night. In a couple of months, if they have had plenty of air to keep them from drawing, they will be in excellent order to plant out into the nursery bed or the show garden at once; only recollect the places they are to occupy, the height they are to grow, and the time they are getting into blooming order. By careful observation you can plant many between others that are coming off before the newly planted ones flower.

BROKEN PROMISES.

YOUR correspondent, John Burrow, in your last number, under the above head, puts the saddle upon the wrong horse, when I wrote my first article on the "Cultivation of the Grape-vine." I intended to continue them monthly until the treatise was complete, but when a double number appeared with an intimation that the work had stopped, I thought no more about it until I saw J. B.'s remarks, I did not even know that the work was continued by another publisher and editor until some months after, so I think he may fairly lay the blame of an unfinished article upon other shoulders than mine. With your permission I will just tell J. B., that in the winter of 1856, I built a lean-too greenhouse intended also for vines; and in February, 1857, I planted inside eight vines, one royal muscadine, one flame tokay, and the rest black Hambro's. The front wall is upon arches, and the border extends four feet inside the house, and eight feet outside, enclosed by a low brick wall; the vines, when planted, were ordinary plants at about 5s. each, except one strong black Hambro'. From this I took three nice bunches the first year; the second, three or four bunches each vine; the third, from fifty to sixty bunches; the fourth, 160 bunches; and this year, mostly still hanging fully ripe, the Hambro's as black as sloes, with a splendid bloom, 184 fine bunches of very fine grapes. Notwithstanding this large crop, I cut away, this spring, at least 150 bunches to thin the crop; the bunches, also, were severely thinned, which has caused the berries to be so large. The tokay bears very large bunches. The royal muscadine is a nice, early, white grape, and every prolific.

I never take any means to ripen the wood, I take down the vines after pruning, in November, and lay them along the front, tying them together with matting. I fill the house with green-house plants, which remain through the winter and spring, until all fear of frost is gone, I then place them out of doors for the summer. I have the house gay through the winter and spring with early double tulips, azalies, camellias, acacias, geraniums, roses, &c. &c. I just keep the frost from these by a flue which runs just behind the middle path, and under the stage. As soon as the vines begin to break in spring, I tie them up to the vines which are eleven inches from the glass: I leave at least two or three buds to break on each

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spur, selecting those when showing fruit with the finest bunches, and rubbing off the rest to prevent the possibility of a deficient show. I use no fire during the summer, nor till the grapes are ripe, and then only a little on cloudy days to keep out damp. In addition to this, I have a vinery for muscats and early work, also a wooden structure 100 feet long on River's orchard-house principle, planted with vines from end to end, on which I have now an enormous crop just ripening, with the assistance of a little fire heat through a flue under the path; these vines were only planted in the spring of 1858.

I have written much more than I intended, and will only now say that if a short practical treatise on the grape-vine would be likely to be acceptable to your readers, I should not object to furnish one, reserving the right to a separate publication afterwards, should I think fit. B.

[We think the "Broken Promises" was applied to the late editor, and not to the writer. No doubt the completion of the subject would be acceptable to the readers.—Ed.]

A GUIDE FOR AMATEURS.

A few of the best Hardy Deciduous Shrubs.—American Azalias, Altheæ flutex. Thorns, dwarf. Dutzia scabra. Lilacs, Persian, Siberian, common. Almonds, dwarf. Mazerion, red and white. Magnolia purpurea. Pyrus Japonica, red and white. Ribes sanguinea, single and double. Spirea prunefolia, double. Wiegelia Rosea. Syringa.

A few of the best Evergreen Shrubs.—Berberis aquifolia. Rhododendrons. Andromeda floribunda. Araucaria imbricata. Garraya eliptica. Arbutus Andrachne, Procera, and Unedo. Euonemus, gold stripe and silver stripe. Box, green and variegated. Acuba Japonica. Yews, green and silver. Laurel. Portugal Laurel. Laurustinus. Hollies, silver-edged, gold-edged, and green. Kalmia latifolia. Magnolia grandiflora. Heaths. Daphne Cneorum. Collina Laureola.

A few Deciduous Flowering Trees.—Laburnum. Acacias. Cherry, double, flowing. Almond. Peach, double, flowing. Mountain Ash. Thorne's red, white, single and double. Horse-Chesnut, white and scarlet. Silisburea.

Useful Climbing Plants.—Virginian Creeper. Clematis Sibboldii, Azurea, grandiflora, and scented. Honeysuckle. Ivy, English, Irish, and variegated. Jasmine, white; and nudiflora, yellow. Forsythia. Wisteria sinensis, lilac and white. Roses. Everlasting Pea. Passion Flower. *Annual ditto.*—Tropeolum Canariensis. Major, Attrosanguinea. Convolvolus major. Sweet Pea. Thunbergia.

Useful Creeping Plants.—Ivy. St. John's Wort. Vinca, major and minor. Saxifraga. *Annual ditto.*—Abronia umbellata. Nolana prostata.

Hardy Annuals, to be sown and thinned out where they are to bloom.—Convolvolus, major and minor. Nemophila insignis, and maculata. Larkspur. Coreopsis tinctoria. Sweet Pea. Candy Tuft. Collinsia Bicolor. Mignonette. Erysimum Peroffskianum. Lupinus nanus, menzisii, and hybridus insignis. Campanula Loyrii.

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Tender and other Annuals that require to be sown and planted out or potted.—Linum grandiflorum rubrum. Zinnia. Ten-week Stock. China Aster. New Everlasting Flower. Imperial India Pink. Clarkia Elegans Marginata. Schysopetalum Walkerii. Acroclinium Roseum. Rhodanthe Manglesii. Phlox Drummondii. GLENNY'S Improved Balsam. Cockscomb. Thunbergia. French Marigold. Clintonia Pulchella. Salpiglossis.

Biennials and Perennials, to be potted or planted out.—Delphinium. Catananche Cœrulea. Phlox. Pansy. Cineraria. Calceolaria. Verbena. Petunia. Hollyhock. Anterrhinum. Polyanthus. Primula sinensis. Pink. Auricula. Picotee. Digitalis. Columbine. Canterbury Bells. Lupinus Polyphyllus. Geranium. Fuchsia. Dahlia. Wallflower. Sweet William. Daisy. Double Chrysanthemum. Heliotrope. Mimulus. Gloxinea. Veronica. Ageratum Mexicanum.

Favourite bulbous-rooted Plants.—Tulips. Hyacinths. Scillas. Crocuses. Snowdrops. Narcissuses. Cypripediums. Irises. Gladioluses.

Scaly-rooted Plants.—Lilies. Frittelarias. Crown Imperials.

Good Edging Plants.—Box. Thrift. Daisies. Saxifraga. Gantiana. Alyssum. Arabis.

Best Plants to grow under trees.—Berberis aquifolia. Ivy trailing. St. John's Wort. Vinca, major and minor. Acuba Japonica.

A few striking Aquatic Plants.—Caltha palustris. Cerastium aquaticum. Iris Pseudacorus. Numphæa alba, odorata. Polygonum amphibium. Ranunculus aquatilis. Nasturtium aquaticum.

A few Plants for Swampy Places.—Hypericum elodes and pulchrum. Aster trifolium. Anthericum ossifraga. Senecio paludosus. Alnus glutinosus and pumila. Betula nana, pumila, and Siberica. Myrica Gale. Salix reticulata. Pinus palustris. Ledum palustre. Arbutus Unedo. Myosotis palustris. Aster trifolium.

A few Alpines and Rock Plants.—Bellis perennis. Lobelia minuta. Saxifraga sarmentosa and aizoides. Veronica prostrata. Violets. Alyssum calycinum and deltoides. Campanula perfoliata. Cervicaria, thyrsoidea, and pumila. Digitalis. Anemone alpina and hortensis. Aquilegia alpinum. Arabis alpina. Aster alpinus. Dianthus colinus. Erinus alpinus. Gentiana acaulis. Iberis saxatilis. Lobelia minutum. Linum flavium. Primula viscosa and dentifolia. Polyanthus. Antirrhinum.

Useful bedding-out Plants.—SCARLET—*Geraniums;* Tom Thumb. Little David. *Verbenas;* Defiance, Lord Raglan. *Sweet William. Scarlet Lychnis. Geum coccineum.* YELLOW—*Calceolarias;* Aurea floribunda and rugosa. *Linum;* Flavum. *Alyssum. Cheiranthus;* Marshalii. *Golden Double Wallflower.* PURPLE—*Verbena;* Purple King. *Lobelia;* Ramosa, speciosa. *Peustemon. Veronica. Anagalis. Delphinium;* Barlowii. PINK—*Geranium;* Tom Thumb's Bride, Kingsbury Pet. *Verbena;* several. *Antirrhinum. Bellis Perennis;* several. *Daphne* Cneorum. LIGHT BLUE—*Ageratum* Mexicanum. *Delphinium* formosum. WHITE—Perennial Candy Tuft; Arabis alpina. *Verbena;* Mrs. Halford. White Daisy. *Phlox;* Omniflora Alba. CRIMSON—Intermediate stock. *Verbena;* Crimson King.

Flowers good for Perfume.—Mignonette. Stock. Pink. Sweet Pea. Carnation. Picotee. Rose. Wallflower. Heliotrope. Lemon-scented Verbena.

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Favourite Greenhouse Plants.—Camellias. Geraniums. Calceolarias. Cinerarias. Styphelia tubiflora. Chorezema varium. Ereostemon buxifolium and cuspidatum. Boronia serrulata. Acacias. Azalea indica. Correas. Cosmelia rubra. Epacris. Erica. Helichrysum Hovea celsii and ilicifolia. Leschenaultia formosa and biloba. Pimelia Hendersonii. Cestrum amantiacum.

Favourite Stove Plants.—Achimenes. Gloxinas. Gesneras. Echites. Alamanda. Hoya carnosa. Passiflora alata and Bonapartia. Æschynanthus grandiflora. Amaryllis. Abutilon venosum and Pictum grandiflorum. Gardenia radicans and florida. Froncisia hopenna and latifolia. Ixora coccinea. Euphorbia splendens and Jaquiniflora. Rondeletia speciosa major.

VIOLETS IN BEDS.

Choose for your beds a shady situation. Let them be dug one spit deep, and mix with the top spit a liberal dressing of leaf mould, or cow-dung, perfectly decomposed; level the surface, and between every four-foot wide bed let there be an eighteen-inch alley undisturbed. As soon as the plants have done growing, after they have flowered, take them up, and divide them into as many pieces as there are with roots to them, and plant these pieces out, six inches apart, all over the beds, watering them liberally as soon as they are planted. Here they will require no other attention than watering once or twice after planting, or more if the weather prove hot, until they have fairly taken root; they may then be left to themselves; they will grow, and spread, and bloom, and the second season they will completely cover the bed. This is perhaps the best way to grow them for their blooms, which may during the season of bloom be gathered daily in fine weather. Cold days, of course, throw them back, and perhaps very few flowers may be obtained for days together; but this protracts the whole bloom; the plant's growth is altogether delayed; it is not merely a delay of bloom, and three or four days' flowers coming in together; it is a complete check to the whole; and when the weather becomes warm again, the whole plant goes on again, somewhat the faster for the check, perhaps, but not so as to greatly hasten the decline of the flowering. When the plants have spread so much as to fill the whole space of the bed, let them be forked up and divided. Let two or three inches of good cow-dung, well decomposed, be placed on the soil, and forked in, to mix it with nine inches of the other soil, clearing out all the roots, and turning the bottom well up among the dung on the surface; replant the same as before, six inches apart all over the beds, using the strongest and best-rooted plants. The surplus may be planted into fresh beds, or in any waste places, according as they are wanted. But there is another way of growing them in beds, to keep them for years without replanting. As soon as the plants have grown, after blooming, take away all superfluous offsets, keeping each plant handsome and bushy, and well stir the surface of the earth between; but the second season, when the growth would fill up the space completely, take away the offsets as fast as they come, and

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keep them to the size of the plant, at the second season. Let them not spread out, but as the runners appear beyond the bushy plant, pull them off. Let the earth be stirred between the plants, and a top dressing of cow-dung, well decomposed, or of a decayed hot-bed which has rotted to mould, full two inches thick, be spread all over the surface between the plants, and be washed in by the rains from time to time. The plants may go on thus for several years, in beds, and only require to be reduced within ordinary limits, after the blooming is all over. This does not apply to one sort only, but all the hardy sorts, double and single. Though it is thought the double varieties are not as hardy as the single, we have had them all flowering in the same bed, and often seen them equally healthy under all circumstances.

VIOLETS IN BORDERS.—The culture is the same in borders as in beds, except that in borders the violet only forms one of many subjects, and therefore the choice of place is the first thing to consider. First, the violet being a low creeping or rather spreading thing, must be near the front, if not joining it. Next, as it loves the shade, such parts of the border as are partially or wholly shaded by trees, shrubs, buildings, or other objects, should be particularly selected for the plant. There may indeed be shady nooks in which the plant might be allowed to spread over the surface altogether; but among other subjects it must be kept forward, on account of its dwarf habit. They are most effective in patches, not only on account of the increased odour, but also of their appearance; for the violet is insignificant when small, but in moderate-sized patches it is effective. They may be used with advantage as edgings to borders; in which case the border, for the width of one foot from the extreme edge, should be prepared with a good dressing, and dug up a foot or a spit deep; when levelled, a line should be drawn where the edge is to be, and the plants in their small state should be planted out three inches apart, or rather three inches from centre to centre of the plant,—of course there is not above an inch or an inch and a half of actual vacancy. In one season they join and spread; and it is quite sufficient to keep them in bounds by cutting them back each season to an even edge, inside and out. This may be done by chopping them with the spade.

VIOLETS IN CLUMPS.—In small clumps of trees and shrubs there is sure to be a natural shade, and under these the violet is sure to thrive; but there must be a sufficient depth of soil; and if the clumps be planted in peat earth or bog, for the growth of American plants, remove it in the spots where the violets are to grow, to give them depth of proper loamy soil for their roots. Here they may be planted the same as in beds or borders; but it is not uncommon to let the violet cover a large space under trees and shrubs; and a few things look better, or do better, so that they have air and are not too much confined. They should be planted about six inches apart, all over the space to be covered, for they will soon spread and join each other. They must be well watered a few times, until their roots have taken hold well of the ground. It is a mistaken notion to plant large plants; they will not root so well, nor spread so quickly, as small ones.

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MULCHING.

If there be no insects about a garden, no earwigs, there would be a good deal more mulching than there now is, but it harbours the vermin so much that few gardeners apply it. We have a settled objection to it in hot weather, when people are most anxious to do it. The effect of it is first to draw the roots of the plant to the surface; and unless the mulching is kept moist, the plant flags. That is one of our principal objections. Another is, that earwigs seem to form a colony there, and often nearly destroy the plant as well as the flowers. In winter time it is another affair altogether. Mulching keeps off the frost, and is of great service to some fruit trees, many herbaceous plants, and to vines that are to be forced. Mulching is best done with stable-dung; and every time a thing is watered, the effect is seen because it is simply laying dung round the stem on the roots of anything; and every time it is washed by the rain or the water-pot, the dung feeds the plant. It is often done with hollyhocks when they are coming into bloom, and to dahlias, much to their disadvantage; for we have seen them half devoured by the colony they have invited. However, one watering with lime water will disturb the inhabitants, and perhaps destroy them altogether.

SUMMER-HOUSES, GARDEN ARCHITECTURE.

Summer-Houses—and winter-houses would be quite as good a name—are roofed to keep out rain, snow, sleet, and hail, and may be of any form that harmonizes with the surrounding scenery, or, if secluded, of any shape we please. Temples are great favourites, and when constructed with taste are highly ornamental. These should be closed on three sides, if open in front, but the open front should face the south-west as near as may be; should be entered by a flight of steps. It will then be high, dry, and useful; and, where the surrounding plantations are chiefly evergreens, they enable us to enjoy the garden in winter. It would occupy a volume to describe the variety of forms that may be adopted for buildings of this kind. The plantations of each side should be carefully arranged: the main features should be evergreen; the background may be varied with deciduous trees. The evergreens should be diversified, in habit and foliage; the conifære should be conspicuous; for nothing is more graceful, nothing more varied. If there be any portion of the ground more elevated than the rest, that should be the chosen spot; and if not, a mound should be formed, if possible, in the best part of the ground for an extensive, or at least an interesting view; and regard should be had to making the temple a fine object from the mansion. But well imitated ruins are noble ornaments in a garden if properly carried out,—not as we have seen mimic castles, the size of an old watch-box, but portions of something at least the size of something real. There is no occasion to construct anything very gigantic, but if it be only the remains of an old wall, let it be the proper thickness of an old wall. Nothing is more contemptible than the imitation of a large castle on a

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small scale; whatever there is standing of the elevation should be as large as would make it useful. It may be impossible to construct ruins on the scale of an old Norman castle, but the remains of an old wall town would be as interesting, and altogether in keeping. The principal object is to impress the mind with a notion of reality. Perhaps there are few things generally constructed more ugly than ice-houses; yet, as the useful portion is under ground, and the only object is to keep off the sun, there is no good reason why the portion above ground should not be ornamental: we do not mean that there should be a toy-like elevation; but we hardly know a more appropriate object than a ruin. Nothing could be cooler than a mass of brick-work above the ice-well. The architect might indulge his fancy to any extent, so that he provided a doorway, and took care that his general superstructure completely intercepted the heat of the sun. There is no reason why it should not be shaded with trees; but the object, instead of being so ugly that it is necessarily planted out and hidden, it might be made an object of interest instead of an ugly brick and thatch hovel. A ruin is not the less effective when secluded; in fact, if more attention was paid to garden architecture, there need not be an ugly feature in the place; a common tool-house may be made picturesque. Connected with garden architecture may be reckoned all the constructions for preserving plants; but as these are generally shut off from the landscape, there is rarely anything but the conservatory that forms a feature in the garden; and here there is often too much display, and that too without harmonizing with anything, not even with the mansion. A pattern is chosen as a man would select a pattern for his carriage, without the least consideration of its fitness for the place it is to occupy. He forgets that his conservatory is stationary, and that it does not accord with his house; and the builder of the one cares very little how much it is too good for the place. We are no great advocates for the frippery that is too often attached to conservatories. Stained glass windows are great drawbacks to plants; for it may fairly be said of flowers, in general, that—

"Beauty, when unadorned, 's adorned the most."

Whatever detracts the attention from the plants themselves is detrimental to the general effect. Externally the conservatory may be what anybody likes the best, but internally all should be plain and neat. Conservatories are generally attached to the mansion, and we can hardly imagine a greater luxury than to walk out of the house in the depth of winter into one well furnished with blooming plants; we do not mean a crowded jungle like that at Chiswick *was*, and that at Chatsworth *is* (unless it had been altered since the late duke died). We cannot admire a jumble of plants with no interest attached to them but their rarity, but one furnished with attractive subjects, to be admired for their beauty. A national botanic garden must have in it much that is instructive, without being beautiful; but the conservatory of a mansion ought to be the show-house, as it were, for the beautiful objects brought forward in the other houses, to be removed when past their beauty, to give place for others coming in; and the skill of the architect will be as much taxed for the finish of the interior as for the elevation. G. G.

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RUINS AND ROCK-WORK.

THE many attempts to provide for rock-plants, from a confused heap of stones thrown together anyhow to the regular imitation of an organized geological phenomenon, too often fail from causes unforeseen and unprovided for; and this induced us, for the last few years, to give some attention to that branch of ornamental decoration in good establishments. But it has always struck us as a strange circumstance, that scarcely any we have seen are like nature, although it has been said that it is almost impossible to construct rock-work that is not like something we have: whether it be trifling or massive, lofty or squat, we have seen something like it; and if it be so, it is agreed that it must be natural. Our own notion, when we are allowed to carry it out, is, that nothing is so natural as ruins: these may be made more or less lofty—there is ample room to exercise the taste, and, whereas, hundreds of real ruins afford us models for imitation; and, according to the degree of decay in which our model may appear, we may select that which has but few stones remaining one upon another, but presents a large area of crushed and mouldering masonry, in which every variety of plant may be provided; or the less "time-worn" edifice that forms a more distinct feature in the grounds; and in either case we may select something which has a real historical interest connected with its origin and its destruction.

There are many dabblers in rock-work construction, and who, though without an idea of their own, can nevertheless imitate anything. There is no mystery in the work; the material once supplied, and a model to work by, any handy workman in the line, and many ordinary bricklayers, could accomplish the task; though we would engage that with two good hands, and adequate labourers and attendants, we could imitate Netley Abbey or Carisbrook Castle as safely as a ruined conduit.

We have suggested more than once that a ruin would be far better than nine-tenths of the present ice-houses. Very striking subjects may be adopted for the external features of every necessary out-building in a large establishment, wherever such buildings are desirable in a garden. Such objects are effective wherever they are seen, and need no concealment. The remains of an old tower crumbling to pieces, with the debris which time has created overgrown with plants would answer all the purpose of rock-work, and look like something; but there is no reason why it should not be the copy of some existing ruin familiar to the traveller, who may have seen the original. Be this as it may, we venture to suggest to those who are about to make provision for rock-plants, that it is far more effective to have an imitation of a ruined edifice which everybody can understand, than a pile of rock which is like nothing in nature, or, which is as bad, like a thousand common scenes that can excite no interest in our travels. If we imitate scenery, it should be scenery the most beautiful: as well might we pretend that a slovenly-made and worse-planted road were natural, and that an ugly curve or even a sharp elbow in a path were to be seen in uncultivated nature. But this is not enough; we have no business to imitate anything that offends the eye; "Man differs more from man than man from beast;" but what would be said of our imitating the

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savage? We see no reason for constructing rock-work in imitation of anything common or ugly. There is nothing more picturesque than some rocky portions of the country, but, in general, these beauties are upon too large a scale, and diminutive models of gigantic subjects are not to be tolerated. The great art of landscape gardening is to make a small place appear rather like a part of a large one; for we meet with lovely spots not more than half an acre in extent in woods and forests of a thousand acres; and the same may be said of rivers—and these are the spots which the landscape gardener should keep in his eye when endeavouring to make the most of his limited space; so should the builder of ruins and rock-work closely imitate some less gigantic object, or copy a detached portion of some nobler work.

There are thousands of well-known objects adapted for garden ornament. But even without such distinct subjects, if it be only intended to provide the proper means for growing rock-plants, a fancy imitation of a ruin is far more picturesque than any rock that can be compassed, or any collection of rocks, so it be not done on a small scale. In constructing such buildings, it must not, as is too frequently the case, be built with mere fissures for plants to root in; there must be hollows with proper drainage at the bottom, as ample as the inside of deep or shallow flower-pots or pans: these must be filled with appropriate soils for the plants intended to be grown. We have seen heaps of stones with flower-pots wedged in, as it were, which, when the gardener had done all he could, seemed only to be a rubbish-heap, and this was called a rockery. Where, however, there is the addition of water, something in the rock-way might be attempted, but even then, though we would not recommend the Giant's Causeway for a model, there is no good reason why a less important cave might not be imitated.

We have rather enlarged upon the subject of rock-work and ruins, because they are rapidly becoming fashionable; and, moreover, instead of being, as of old, an expense of which the limit has been unknown, and sufficiently expensive to deter many from attempting it, the cost can be ascertained without difficulty, the time it will take calculated, and models to scale submitted for approval before a brick or a stone is laid.

The principal material used in the construction of rock-work is the vitrified brick run together where a stack is over-heated, and called burrs. Most of the brick-fields have more of them than they like, for to make these there is a serious loss incurred. They do not, however, quite give them away; they charge generally from seven to nine shillings per load, except that when they have a great quantity they might be induced to take less. These ought to be built without anything, and made to stand alone by wedging any that will not hold firm with smaller bits of burr, or tile, or brick; and when they are in their places mix cement and sand, as if to work at plastering a front, and fling this at the joints all over, because it then enters the vacancies far better than it could be done by any attempt at pressure, and gives the fabric a firmness and stability that nothing else will. We do not mean that the whole of a gigantic work shall be built before the cement is applied, because you must make firm as you go on. A man may build as high as he can well reach, and then cement all firm by flinging it into every part where the lumps

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meet. When that is dry he may stand on his own work, or rear a ladder against it, for it will, if properly done, be as firm as rock itself. We have one thing to mention that is highly important—pockets must be left, in which soil enough to grow plants is to be put, and holes must be left at the bottom for drainage; otherwise nothing will prosper, though a plant might live for some time. G. Glenny.

MISCELLANEOUS.

Striking Cuttings.—The absolute necessity of cutting all the pieces intended for striking, close under a joint or leaf, is maintained up to the very last writing of the very best writers. Yet there are those who maintain, and with some degree of confidence, that hard-wooded things will strike away from a joint; that is to say, that if there is a joint above ground to grow from, there need be no joint under ground to strike from. This has been proved, says Mr. Fairbairn, with Camellia stocks, which have been struck by hundreds with a leaf and a bud above ground, and half an inch or more of wood, without a joint, under ground. It is said that the roots strike all round and in great abundance, and not partially, as is often the case when cut up to a joint. Mr. Logan said, that, "Fuchsias strike as freely at the parts between the joints as they do at the joints, and the roots are better developed than they are at a joint." If this be true, it will double the capacity of all plants to propagate, and save one joint of very two, which is no small object. Presuming this to be the case with some plants, it cannot be with all; and we much doubt if it would do with any soft plant; they would rot instead of striking root. It was said that Mr. Hally, of Blackheath, struck all his stocks that way, but we never had the fact confirmed.

The Pansy and its Properties.—It has been contended by some florists, or pretended florists, even in this work, that the two side petals of this beautiful flower ought to meet at the bottom, to constitute a first-rate form; and yet it is the most unmeaning and useless points that could be thought of; because the bottom petal has actually to be lifted up before it can be discovered, whether the side petals join or not. We observe, in the original "Properties of Flowers," that they are as little shackled with details as possible. The Pansy is to be round in the outline, and smooth on the edge. Now, if this be secured, it matters not how. Some of the best-formed flowers have the side petals far from meeting underneath; and all useless points are carefully left out in the original work on this subject, because, so that the essential properties were produced, it mattered not, in the opinion of the author, how; and, of all the pretended additions or explanations upon the subject of properties, none have been more absurd.

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HINTS FOR LADY GARDENERS.

PLANTS require, even in a greenhouse pot, room for the roots, good soil to grow in, plenty of air, enough—and only enough—moisture, and protection against frost. Neglect in any of these requisites, even in the best of atmospheres and the finest of greenhouses, must be fatal. Why should we expect them to want less attention in a dwelling-house? Yet what is the history of millions of plants grown for the dwelling-houses of all classes? They are placed where they are intended to live; they are watered, day after day, to excess; the water runs into the saucer in which the pot is placed, and there the poor things stand till their roots rot; they get worse by degrees, until they can stand it no longer; the leaves drop, or dry up on the stems; and the good people think, "What a pity it is plants won't live in their locality!" Or the plants are not watered at all, unless a shower of rain can get to them, and they go off somewhat more suddenly. Now these two extremes would equally kill a plant, if it were in a duke's conservatory; therefore, the dwelling-house must not be blamed in either case. But let us give a history of many other rather more fortunate plants. Sometimes they are watered, sometimes not; they are watered before they quite die for want, and they dry up before the roots are quite rotted by wet. With some luck on their side, they live a long while; at last they die of decline. They have filled the pots with their roots, which are matted into a solid lump; no water can go through them, no nourishment reach them. They die for want of pot-room; but they would have died just the same in the Chatsworth Conservatory: it is not the dwelling-house that killed them. Well, other plants, perhaps, are placed in a balcony all the year. The rain, fortunately, preserves their lives; but the September frost comes and cuts short their career. It is, in fact, the withholding of certain conditions which kill the plants; and it would be the same everywhere, place them where you may. When plants are purchased, it should be at nurseries; and if, on turning out the ball of earth from one of them, the roots are round the outside, let the nurseryman shift it into a larger pot before you have it home. We are supposing the plant to be a good one—not stock, or aster, or any temporary thing; but a geranium, a camellia, or any other plant, we want to keep for years. When at home, the first care should be the watering; and, as a standing rule, never do this while the surface is even damp, and never let it stand in water, for it is death; better is it to let a plant actually flag before it has water, than water

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is to be pirated on a lace veil, and another is to figure on an anti-macassar; so Messrs. Major and Son have absolutely been "doing good by stealth," and when they read this, they will "blush to find it fame." Had we been away from home we should not have thought of this appropriation; but with the facts in our ears, and the fruits before us, we were obliged to notice this additional boon to the fair sex. The authors go into the details like men of business; the plans for flower beds on grass are admirable, but we do not like those on gravel; we defy the best man in England, and he shall have one of Boyd's patent two handled lady's rollers, to roll it properly. We have always considered that the gravel walks in a flower-garden should have all the intricate walks that form the beds of equal width; we are aware of the Bartholomew fair fashion that permits coloured rock, slates, shells, and various matters to figure in, what we call, baby gardens, and that even the Horticultural Society, that should be above such tricking, has condescended to adopt a little of it; and we know that in making the walks we could concrete the gravel to make it as hard as stone, and thus exclude weeds; but there is nothing sets off a garden like good coloured binding gravel, that can be renewed now and then by turning, and become, as it were, fresh, when neatly rolled. However, this is simply our notion as opposed to theirs; and our prejudice against corners in gravel walks is so strong, that we could not get over it. The design of number nineteen is otherwise very beautiful, far better than number twenty, the only other one for gravel; each of the twenty designs is fully described, and the ground it will occupy set forth plainly. The work, newly got up, is like nothing else that we have at present, so that we must pronounce it an acquisition, and recommend it to the ladies; for it will give them new ideas in their works of design, whether they are done upon gravel, grass, muslin, or canvas.

RAMBLING NOTES ON THE VERBENA.

THIS beautiful little flower is valuable in a flower garden, and almost indispensable as a subject for bedding out; but so much of its usefulness depends on its habit, that some of the most showy flowers in a stand are worthless in the garden. The old Verbena (Melindres) is a spreading, creeping plant, close to the ground, rooting at every joint, and blooming its whole length, showing the whole summer a surface of brilliant scarlet. The flowers are not well formed, but, until a better-formed variety be found, equally dwarf, equally spreading, and blooming as brightly and abundantly, Melindres cannot fail to keep its place. Among many new and splendid varieties, in other respects, there are many prevailing faults; some grow very robustly, make very long shoots, straggle a long way, and flower only at the ends; others grow very strong and tall, but require support, or else lie about without order or form; some bloom so slowly that a truss is never all in flower, but the outer blooms decay before the inner ones open—these always look mean; others again have tall instead of broad trusses, and the individual flowers form no kind of surface, but

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appear so many steps, one among another. Now we are careless about the shape of the truss, so that the blooms touch one another, and form a surface of colour. This may be flat, like V. Melindres, or half a ball, or a cone, or even higher; the grand object is to have the face of the flowers outwards, and touching each other; the preference, however, must be given to the spherical trusses; and all those that do not, at some time or other, show all their individual blooms open on a truss, are not worth keeping. The value of the Verbena, as a bedding subject, for Dutch or geometrical gardening, is great, whatever form the bed may be; whatever figure we have to fill out, the Verbena is ready with almost any colour, requiring only to be planted at moderate distances, for it will soon cover the ground. In planting out the Verbena in any particular figure, let one plant be tolerably near all the principal points, because it the sooner fills those features which distinguish the bed; for instance, say the shape is a diamond, let a plant be at each point within a few inches, that it may fill it out at once, because it then only requires to be clipped into shape, and its growth turned inwards, and the cutting encourages fresh growth and abundant bloom. The bed will not be long filling and coming to its colour: however oddly the shape may be made, the same plan should be adopted. If you have plenty of plants, they may be planted nine inches or a foot apart, but the outside ones not more than three or four inches from the edge. If they are neglected after planting, they will soon straggle over the edges on the walks, and destroy the form of your design; but you must cut the shoots to occupy only the bed, lay the shoots in the direction you wish them to take, and if they do not lie without fastening, peg them down with little pegs, the form of a small hooked walking stick, which can be cut by thousands from birch twigs, or it can be done in wet weather by little bits of bass matting six inches long, dibbled into the ground, as if the two ends were being planted, for when the hole is made, the two ends of the bass which is looped over the shoot to be held down, are put down into the hole, and the earth pressed in upon them with the dibble; this will apply to all creeping plants, and can always be done when pegs are scarce, or not at hand; but it is generally enough to lay the shoots the way they are to grow. When the plants make growth, the ends can be clipped as true to the figure as the box edging itself is, which should by no means be covered at any one part by the plants in their ramblings. For such gardens as are formed into figures, and which derive all their beauty from their uniformity of colour, geometrical gardens have necessarily various shaped beds, and it is a good plan to have all the beds that are of a form the same colour, or half of one colour and half of another. Thus, if there are six of a form round the whole design, three may be of one colour and three of another, but six very prominent beds should be scarlet, because it is the most striking—white is a very striking colour, if we may call white a colour; then there are pinks, purples, lilacs, crimsons, and all manner of shades but yellow; and this is the only exception to make in planting the whole. Verbenas will not supply yellows, and it must be done with something else; they will not give a blue, but they very nearly approach it, and therefore blue could be done without. The yellows may be supplied variously at different times. Yellow Allyson is a dwarf perennial that will bloom with the earliest and last some weeks in bloom, and it

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must then be replaced with other subjects, got forward in pots, or otherwise; but there is a so-called Yellow Verbena (Sulphurea), we believe, from this we may one day have improvements in colour, for it has not much more of the yellow in it than a yellow hyacinth, nevertheless we hold it to be the easiest and most permanent mode of planting a Dutch garden, to use Verbenas only. The heighth, colour, form, and other matters, are so easily regulated, and the bloom is uniform and permanent, clearing and regulating being the only thing required after one is planted. By cutting out what may be called old wood, and leaving young shoots, the plant may be constantly renewed, as it were, at the end of the season, which may be considered about September, when the frosts begin, though in mild autumns the bloom will continue much longer.

As soon, however, as the beauty of the plants has gone, let them be pulled up, and all the little-rooted bits may be put into stone pots. The small shoots may be put into large pots as cuttings, an inch apart, and covered with a glass; the cuttings to be prepared as others are, by cutting the bottom off just below a joint, and cutting off the bottom leaves. These pots, if put into a cold frame, and preserved from frost and damp, will be rooted during the winter; but if any quantity be required, or the striking is wanted to be hastened, that they may be potted off and grown for strength, use gentle bottom heat, and the cuttings will root like so many weeds. When they are rooted, put them singly in store-pots, and keep them in the cold frame, or in the greenhouse, or, in fact, any where, so that they are protected from frost and damp; and keep them in the store or small pots till planting time; or if it be desirable to bring a few forward for early blooming, repot them in large sixty-sized pots, and place them in the greenhouse. Here they will grow and get into bloom before planting time, so that, as soon as we are clear of frosts, the beds may be dressed, and will look gay directly. But the Verbena occasionally takes a shrubby habit; and there are many of the new varieties which form pretty greenhouse plants: these may be treated as such, and are the best for the borders, which they keep brilliant all the summer. It is the intermediate varieties, those which are neither shrubby nor creeping, that are so troublesome to manage, and, therefore, comparatively valueless. This renders it necessary to see Verbenas growing before we select them; when they are shown in stands, we may judge of their forms and their trusses, but we can form no idea of their habits; the finest trusses may be produced in very small quantities, and on very straggling plants, and, therefore, may not be good for much as plants; but even these may be desirable for exhibitions. The Verbena will grow in any moderately good soil; but for potting, two-thirds rich loam, that is to say, loam with plenty of vegetable matter in it, such as the top short spit of a good pasture, and the turf rotted in it, and one-third turfy peat, makes the best soil for potting, or rather for growing them in the second pots. There used to be a fashion of training the Verbena up a short trellis in pots, especially when the new varieties first came out, and we have seen them very gay; but these things look too mechanical; it is, according to our notion, an unnatural way of growing plants, something like a hundred wooden legs to a geranium, and half the number to hold up roses. It is, also, unlike gardening, and makes plants look unlike

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nature. When a good Verbena is discovered in the seed-bed, we are naturally anxious to propagate it as soon as possible. For this purpose it is well to cover the plant with a glass: this has the effect of drawing up the plant; and the top should be taken off, and struck in bottom heat, and grown in the propagating house, or in the frame where it is struck. The old plant will grow fast, and throw out side shoots, which may be taken off and struck like the first. All these cuttings will grow fast, and may soon have their tops taken again, and throw out their side shoots, which, in turn, may be taken, and so on; the old plant furnishing cuttings, the cuttings in turn becoming plants, and, when their tops are taken, giving their supply, until, before the season of letting out, they are multiplied to hundreds. But there are some who will allow the plant to grow in the seed-bed untouched, but pegged down as it grows, so that some that are free-growers and strikers will root at every joint, and join so many strong plants. Others let it ramble as it likes until the period for taking it up, and then cut it to pieces, to strike and multiply during the winter; but it is quite clear that the first plan will provide the greatest number; and that when we have a really good variety it is much the safest way; because it sometimes happens that the seedling plant, from some accident or other, dies, and the cuttings that are already off and struck, form the only stock, which would have been totally lost but for the early propagation. Nobody ought to lose an opportunity of striking a cutting of a valuable seedling, because nothing is so vexing as to lose a really good variety of anything; for such success as raising a valuable plant is not frequent, and when obtained, every precaution that can be taken to prevent its loss should be adopted directly.

REMARKS ON LANDSCAPE GARDENING.

BY JAMES MAIN.

In the first number of the *Horticultural Magazine* there are some very pertinent remarks on the highly interesting subject of Landscape Gardening, and also advising that it should be one of the studies as an indispensable portion of the mental acquisitions of every gardener. For though the art has been long considered as something very far removed from the ordinary duties of gardening, and the execution of it in most cases transferred to a class of professors called Landscape Gardeners, and yet there is no head-gardener, now-a-days, who is not expected to be as much a proficient in the art of laying-out ground, and forming ornamental scenery, as he is in any other department of his business. The operations of trenching, digging, levelling, and removing earth, are familiar to every one who knows the use of mattock and spade; and so is sowing, transplanting, and rearing forest trees. But it is said that disposing the surface of the ground, laying out the roads and walks, fixing the stations and extent of plantations, and the kinds of trees to be preferred, require the exercise of "fine taste," and a special and nicely correct judgment. Now what is called fine taste as relating to landscape, cannot be taught by precept, it

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can only be acquired by studying the most strikingly beautiful scenery in nature, and especially those scenes which the most eminent landscape-painters have chosen to depict. There are certainly a few rules which are generally applicable, and these may hereafter be detailed; but there is one circumstance which sets all rules at defiance, and completely governs the improver in all things. This is what has been significantly called "*The Genius of the Place*," for every place has naturally a character peculiar to itself. It may be simply beautiful, from the gradual undulation of its surface, its quiet flowing river, or its placid lake. It may, from the amplitude of its hills, dales, and all its other features, be made to assume the character of grandeur; or if, from the irregularity of surface, precipitate declivities, naked cliffs, and rapidly-flowing mountain stream, it may present all those striking features which constitute that description of scenery which is called picturesque. Now the improver, being first of all aware of the natural character of the place, has only to take care that whatever he may see fit to add, shall be in accordance therewith; and if anything requires to be taken away, it must be done with the same view. Buildings and trees are the principal objects which an improver can introduce into his composition; and as the natural characters of places are different, so the characters of both buildings and trees are different also; and it is in the proper association of those characteristics which show the good taste and skill of the artist. No man of taste would wish to place a Grecian palace among rugged rocks and ravines; nor see a frowning Gothic castle surrounded by beautiful scenery. Neither would he encumber a beautiful campaign with a profusion of murky firs and cedars, nor banish such objects from an alpine scenery.

There are many things which fall within the province of a landscape-gardener, in arranging a country residence, which he should studiously avoid; and also many effects of judicious disposition which he should study to create. A knowledge of those particulars enables the improver to acquit himself with credit; it is a code of laws which has been fixed by the arbiters of fine taste; and which should be known to every improver of landscape scenery.

ARISTOLOCHIA SERPENTARIA—VIRGINIA BIRTHWOOL, OR SNAKE ROOT.

Class 20. Gynandria. Order IV. Hexandria. Nat. Order. Sarmentaceæ, Lin. Aristolochiæ, Juss. De Cand.

Gen. Char. Calyx 0. Corolla monopellous, ligulate, ventricose at the base. Capsule six-celled, inferior.

Spec. Char. Leaves cordate-oblong, acuminate. Stems weak, flexuous, round. Flowers solitary. Peduncles solitary. Lip of the corolla lanceolate.

It is a native of North America; it grows in the woods from Pennsylvania to Florida; flowers in May and June, and ripens its seeds in September. It is a perennial plant, generally under a foot in height. The root is a small bundle of fibres of a bright yellow colour. The stems are slender, slightly branched, rather downy, round and flexuous, often of a reddish colour. The

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leaves are alternate on short petioles, oblong, entire, acuminate, heart-shaped at the base, and three-nerved. The flowers are minopetallous, of a stiff texture, and of a dull purple colour. There is no calyx; the corolla, like others of this species, consists of a long contorted tube like the letter S, ventricose at the base, contracted in the middle, having its throat surrounded by an elevated ridge widening into a triangular lip. This plant contains forty-one species, one of which grows on the borders of Mudelin, and Humboldt relates of the flowers being large enough to make hats for children.

Medical Properties and Uses.—The medical virtues of this plant have the power of arresting the effects of serpent's venemous bites; it is employed in all features of a typhoid character; and has been highly spoken of by Cullen, Munroe, and other eminent physicians. It is used in England as a powerful tonic and diaphoretic, and occasionally acts as an antispasmodic and anodyne. It is of an aromatic odour similar to camphor. In remittent fever, when the remission is obscure, or not easily discerned, snake-root is by some preferred to linchona. In America, where bilious vomiting is frequent, it is found an efficacious remedy, checking nausea and quieting the stomach. It is given in decoctions, in doses of a table-spoonful at a time, several times repeated. Externally, it is used as a gargle in cynanche maligni.

The most common form of exhibiting it is an infusion made by pouring a pint of boiling water on half an ounce of the root, and steeping it for two hours in a covered vessel. The dose is an half-ounce every four hours. Boiling dissipates its volatile qualities. In powder, its usual dose is from gr. X to 3ss.

Off. Prep.—Tinctura Serpentariæ, L. E. D.
Tinctura linchonæ composita, L. E. D.
Electuarium Opiatum, E.

IMPROVING THE SWEET WILLIAM.

As many persons are now offering plants of Hunt's Sweet William, it may be desirable to some, who wish to go ahead, to receive a few hints as to the best way of treating them, and of still advancing; for we hope to see collections by name, as we already possess of pinks and carnations. We begin by supposing you already in possession of the seedling plants ready to be put out where they are to bloom. Get a place dug, and dressed with some well-rotted dung, neatly levelled, and the plants disposed at distances of one foot from row to row, and six inches in the row. They must be watered in, to settle the earth about their roots; and if the weather prove fine and warm, they may require occasional watering for three or four weeks. They must be regularly weeded and kept clean, and when hoed, a little of the earth should be drawn up to their stems. In this place they must remain till they begin to flower, when they must be examined daily; and the instant any one opens with no improvement in it, throw it away, or cut off the flower-stems, that it may not make the next year's seed the worse. Those which prove to be smooth-edged, or which exhibit any marked improvement, should remain in the bed to

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seed from; and all the young increase in the plants—that is to say, all the shoots that have not flower-stems—should be cut off and struck, like Pinks; or if long enough, layered like Carnations and Picotees; because it is of the utmost importance to seed from those which have improved, and, by propagating these, to keep a large proportion of them among the seedlings, that any that have sufficient novelty to offer a temptation to seed from them, may be impregnated with those which are evidently advancing towards the standard. It may be, that the remarkable size, or colour, or habit of one, in other respects not good, may render it worth seeding from; and in this case, the more it were surrounded by the smooth-edged ones the better.

Before any of these new varieties will be worth naming, they must attain the two qualities of size, and smoothness of edge. It will be worth while to cut out two-thirds of the pips from those heads that we mean to seed from. Everything that tends to increase the size of the flowers should be resorted to: the planting in rich ground and in an open space; reducing the heads of the plants to one, by cutting off all the rising stems as soon as they spring up; and the reducing of the pips or buds on the single head, to about as many as will touch one another, and no more. These are means used with the other members of the Dianthus family, such as Pinks, Carnations, and Picotees, and with the best possible effect. Another means of advancing their size, is to pick out from the entire collection a few of the largest, almost without reference to other qualities, except desirable colours, if they can be easily found; because it is certain that but little can be done with them as show-flowers, unless the size can be considerably increased. We should plant out some of the best of the smooth-edged kinds by themselves, to be treated for seed; and when the main body of the seedlings bloom, cut off the heads of such as have remarkable colours, or are very large, or exhibit any rare quality, as soon as they are fully in flower, and taking the head in the hand to where the smooth-edged ones are, turn it face downwards on the flowers of a smooth-edged one, tap gently three or four times, or more, so as to shake out the dust or pollen from the cut one, on the flowers of the other, tying bass round the head so impregnated to mark it, that it might not be done twice over; of course, the more plentifully the dust is supplied, the more certain will be the results. By carefully looking over all the stock, sufficient heads may be cut to impregnate all the smooth-edged ones, and thus prepare seed, from which there will be every chance of procuring desirable varieties.

These great improvements, however, are not produced in the early attempts; all we can hope for is novelty, and a trifling advance each season. At the same time, however, that we impregnate the smooth-edged kind with others that are remarkable for size or colour, we should cut some of the heads of the smooth-edged varieties grown for the purpose, and with them impregnate some of the heads of others which are promising, though not, perhaps, smooth-edged; these ought to be marked by tying a piece of bas matting round such heads as are impregnated. But there is a class of double flowers of the Sweet William, and these are susceptible of improvement in the same degree as the single; that is, by increasing the size, getting rid of the fringed edges and the speckled

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surface, and obtaining bright colours. And as the double ones can be propagated in the same way, and yield seed in the same abundance, there is the same opportunity and encouragement. There is one character in the marking of the Sweet William that renders it inviting as a show flower. It comes in various circles of flowers, and an individual pip is often as strongly marked as an Auricula. In the double ones, it sometimes shows an eye like the pink; but regard should be had to the novelty of colour, and mixture or contrast, at the same time that we recognise improvement of edge and the thickening of the petal. The same proceeding as regards seeding and crossing from the best, as has been recommended for single ones, should be observed with the double ones; and no pains should be spared to propagate such as give any evidence of an advance. The seed being saved from the best, and being carefully gathered before it begins to shed about, the sowing may be deferred till the spring or summer. From the latter end of April to the beginning of July, the seed may be sown thinly in a bed of tolerably rich mould, and be raked in evenly, and there left to come up; but if a very dry period occurs after sowing, it will be necessary to give water, because, although plenty may come up, many of the seeds would perish, and those which are destroyed are just as likely to be good as those which come up, and perhaps more so, because the higher the breed of any thing, the more delicate it becomes. When the seeds are up, they must be kept clear of weeds, and be watered in very dry weather; as soon as they have attained sufficient size to be planted, set them out, as directed for small plants, raising the roots without breaking them, and watering them after planting to settle the earth about them. Here they may remain till they bloom, and you reject the bad as fast as they open their flowers, which will be in the months of June and July in the following year.

PROPERTIES OF THE SWEET WILLIAM.

From GLENNY'S "*Properties of Florists' Flowers and Plants.*"

"WITH regard to the properties of a Sweet William, the head of the bloom should be large; the individual flowers should be round, smooth on the edge, flat on the surface, thick in the petal, and the edges should touch each other, without tapping over; the colour should be pure, free from speckles; if marked, the colour should be well defined, the divisions in the petals should not show, and the footstalks of the individual flower should be long enough to throw them up above the green of the plant itself; there should not be less than nineteen pips or flowers in the truss."

The Sweet William is very apt to throw up a stem from every shoot, so that there is a difficulty sometimes in procuring shoots to strike; however, the richer the ground in which they are grown, and the more open and airy the situation, the more likely are the plants to make bottom growth; and if it be necessary, the entire bloom of some plants should be sacrificed, to encourage the increase of grass or shoots at the base. The layering of the Sweet William is often difficult, from the shortness of the shoots; but if they are merely stripped off at the bottom, they will strike in the shade under a glass. The rooting may be done on the old plant by merely pegging down the shoots, and earthing them so as to cover the stalks; and again by earthing up the plants in the rows, so as to reach

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half up the stems of the shoots, you will frequently cause every side shoot to be well rooted, and they will only require to be detached from the old plants, and put out the same distances as seedlings. We must not, however, expect all smooth-edged flowers when we sow seed from smooth-edged: a large portion always go back; but by beginning with "Hunt's Sweet William," we are sure to have some very beautiful, and we must summon courage enough to throw away the bad.

IMPROVING THE DRIVE UP TO A MANSION.

Boldness is one of the most important features in all the parts of an estate; but as landlords go along the drive up to the mansion, who go nowhere else about the domain, it is especially necessary that all the planting be upon a large effective scale. A clump on the inner side of a road may be fifty yards long, and conceal the house from view the greater part of the length. It should be thirty or forty feet wide at the widest part, and the planting should be very well diversified. These clumps, to be really effective and consistent also, might be composed of groups of certain plants. One clump might contain the leading varieties of holly; another, the chief of the hardy firs; a third, might be mixed; and, perhaps, alternate clumps should be mixed, for the sake of introducing all the flowering shrubs and trees of any pretensions. But the clumps ought not to be all of a size. Those which are mixed should be much larger than others intended for groups of particular families. All of them should be only separated from the road by the hedge, which should be preserved always eighteen inches wide. In the mixed clumps, there ought to be Evergreens enough to form the leading feature or figure of the clump, so that in winter time, when deciduous plants are black and cheerless, the place may look fresh. It is the failing of many excellent places in all other respects, that the planting is ugly four or five months in the year, whereas they ought never to look winterly. Deciduous trees should be standards, and be always surrounded by Evergreens. Suppose a clump to be fifty yards long, and in the wider portion from twenty-five to thirty feet in width; in the centre line, which should be about fifteen or twenty feet from the road, there might be Standard-rose, Accacias, Thorns of sorts, double-flowering Cherry, Sumach, Lilac-guilder Roses, Laburnum, Scarlet-horn Chesnut, Almond, and Pink (the double-flowering), and such like. These should be planted ten feet apart, in a gaunt way; but the Chesnut, Almonds, and Laburnums grow rapidly, and may have two or three feet more. The next row towards the edges may be Evergreens. In this, arrogant Firs will, as a temporary thing, assist for two or three years to give the effect, but must then be removed, except two or three good sorts, which may remain to diversify the foliage of the clump. Hollies of sorts, Laurels, Bays, Portugal Laurels, Arbutus, Rhododendrons, Azalias, Pyrus Japonicas (which has leaves or flowers nearly always), Andromedas, and Kalmias. These make up a handsome flowering clump, but may yet be aided by the hardy heaths. Supposing the second row from the centre takes tall Hollies and Firs, that is to say, a Holly or Bay six feet high before the stumps of the deciduous standards,

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and a Fir, or common Laurel, or Portugal Laurel, between them, but nearer the centre, in front of these, and in the best way to form a sort of bank towards the centre, and dwarf in front, let these be all the shorter and more choice, such as Rhododendrons, Azalias, Pyrus Japonicas; and yet more in front, the Andromeda Florabundi, the hardy Heaths, Daphnes Mahonias, Berberis, and the dwarf Evergreen kinds. When the different kinds of any family are made to form a clump, you must not only put the tallest in the middle, but the most rapid-growing varieties also, or the clump would soon be out of order; nor should they be planted too close, because it is desirable that each specimen should be perfect, and not injure one another for many years. The Hollies are particularly favourable for this, affording, as they do, not only a diversity of form, but also of colour; for there are different shades of green, and many different colours of variegated, and different proportions of the light colour as relates to the green in the same leaf. The disparities of colour are also different, some being light in the centre of the leaf, some on the edge of the leaf, with green in the centre. Twenty or thirty kinds may be selected so distinct as to form the most interesting group; and besides this, there are some with yellow Berries, which form a beautiful contrast with the red. The Firs also make an interesting group, and should be sufficiently distant to allow of their growing in their natural form, without crowding each other; and here, too, the tallest growers should be in the middle. The Arbutus does not offer many good varieties; but still, there are sufficient to make a small interesting clump. The single specimens should be displayed in the neighbourhood of clumps, mostly in the corners or recesses formed by the clumps, but not near enough to derange the appearance or spoil the harmony. The choice of single specimens is endless. The Weeping Ash, and Weeping Thorn, the Purple Beech, the double, white, and scarlet Thorn, and some of the most remarkable of the fruit-bearing kinds, the Spanish and horn Chesnut, the Sumach, Mountain Ash, the Portugal Laurel, Rhododendron, Laurentinus, Magnolia, Gladitia, Holly, and a hundred others, are ready and appropriate; but no specimen should be like those in the clump next to it. The Magnolia affords an opportunity of forming a clump of moderate dimensions of its own family. The purple and white blooms of Panpuria and Conspicua, coming in the spring, are especially favourites; and there are a number sufficiently hardy to do well when they are at all sheltered. So much, however, depends on the taste of the planter, that it would be quite out of place to give more than these general hints. The placing of the clumps at particular parts of the road, to conceal objects, either for the time we are passing, or altogether, must depend on the circumstances. As a general principle, the mansion ought not to be seen on entering, nor from the road at the entrance; nor ought it to be long in sight at a time; there should be constant interruptions; nor ought any piece of water to be seen, without the outline of it being broken by clumps and specimens at or near its margin, or both. These few remarks may be of use in either laying out or improving the approach to a mansion; but we do not pretend that they can altogether enable a man to make the best of his estate. But, they may lead him to employ a practical man, and enable him to judge how the person he employs is conducting the work.

AN OLD LANDSCAPE GARDENER.

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SOLUTION FOR POTTED PLANTS.

On the authority of the Gardener's Gazette, which is, it would appear, a sworn foe to quackery, we are told that half-an-ounce of sulphate of ammonia in a gallon of water makes a solution that produces a most extraordinary effect on plants in pots; every sixth watering is to be made with this, and the other five with pure water—rain or river water is the best. Here then we have no about and about of it; no "put a little" sulphate of ammonia; no "apply it occasionally;" no indefinite "pinch" of this, and "handful" of the other; no "twopennyworth," that may be one quantity one day, and double as much the next; but a distinct unvarying quantity, and to be applied in a distinct manner. If it had been said, water once a-week with this solution, it might be when the plant only wanted watering twice a-week, and the plant might be killed from excess; but every sixth watering may be at times once a-week, at other times once in three weeks; but it presupposes that five pure waterings are only given when the plant requires moisture, and the sixth time it requires moisture it has the sulphate of ammonia. We are giving this without saying it is good or bad, except that, as the Gardener's Gazette so invariably denounces all kinds of quackery, and indeed almost everything in the shape of a nostrum, we think it would scarcely commit itself in the recommendation of any solution for plants of a doubtful efficacy.

ACCLIMATIZING EXOTIC PLANTS.

Let no one imagine they will successfully acclimatize an exotic plant without paying strict regard to the circumstances of the plant in its native habitat, such in part as situation, aspect, elevation of site, temperature, humidity, time of flowering, seasonal changes, &c. These circumstances must be all, more or less, studied by whomsoever would successfully acclimatize exotic plants. A plant may be a native of a country warmer than our own in some degree; yet if its native situation be a moist height, or shady mountain side, we should undoubtedly do wrong in placing it in a dry, hot, sheltered situation in this country. On the other hand, a plant may be a native of a colder country than our own; yet if its native situation be a sunny, sheltered, and dry one, and its season of flowering late, it would surely be wrong and profitless cultivation in this country, to place it in a dull, damp situation; which, were we to look to the only one circumstance of its coming from a colder country, we would naturally do. Again, a plant may be, or may seem to be, from such a cool or shady native habitat, as to feel our summer sun too strong and scorching for it, and accordingly require shading from its too powerful beams, while we must not, on the strength of that circumstance, conclude that the plant will stand our winter's rigour without protection. We must first learn whether it be a native of the northern or southern hemisphere; if of the latter, that will account for its inability to withstand our summer's sun at a season when, though it be summer with us, it would be winter with the plant in its native habitat; and its nature not being changed with its situ-

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ation, it is only harassed by our summer's sun, at a time when it should have, and strives to enjoy, its winter's rest; therefore, it cannot withstand our winter's rigour at the season appropriated to it by nature for its summer of excitement. Were it not for this circumstance, there is no doubt that the half-hardy Sollya Heterophylla, Billardia Longiflora, &c., would be among our hardiest wall-plants. These are circumstances the acclimatizer must well attend to ere he plant out a single exotic; and next, and of equal importance, the soil in which the exotic is placed, be its richness or poorness what it may, must be of an open, free, unretentive texture, and well drained. Such exotics, in general, as are natives of boggy or marshy places, can only be kept well over winter in felt-covered pits or frames, or at the bottom of ponds fed by springs. The plant must be started into a strong and rapid growth in spring and early summer, so as to have its growth completed and properly ripened before winter, when a covering of as dry and impervious a nature as possible must be laid over its roots, and around its base, or *life knot*, so as to exclude alike the frosts and moistures of our changeable winters. If the bole or branches of such plants receive any protection, it ought to be of a nature more to exclude moisture than air, which is often useful in the severest winters. By observing these simple and easy rules, I have found much difficulty in having stout and abundant flowering specimens of such generally considered greenhouse plants as Wisteria Sinensis, Maurandya Barclayana, Jasmines of all kinds, &c.; on various aspected walls, in many and cold parts of Scotland, they do well for years, where others of a much more hardy nature, but differently treated, died during the winters these plants survived.

JOHN MCDONALD.

[After all, they who succeed have not done so by changing the constitution of the plant, but by altering the condition of the climate and soil to suit it.]

RANUNCULUSES.

IT was once seriously recommended by a gentleman who has been supposed to understand the growth of these very beautiful flowers, that "fresh cow manure" should be stirred in water, "the thickness of thin pea soup," to saturate the ground in which these roots are to grow. We shall always be anxious to caution young growers against dangerous practices. What may be the effect where there are no cows, and the manure must be brought from a great distance, we know not. The fly, which causes myriads of maggots to breed in cow-dung, may not be present in the neighbourhood, but it is the most dangerous and tempting invitation to hosts of enemies that ever man could think of; and he who adopts this plan, will probably have his collection destroyed. We say again, it may not be fatal under some circumstances; but it is one of the old nasty plans which may be coupled with the delicacies recommended in old Auricula books for the culture of that flower. We doubt much if there be anything better than thoroughly decomposed cow-dung; or anything much worse than the same article while new or fresh.

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CULTURE OF THE GARDENIA.

THERE is no plant, that we are aware of, more fragrant, more handsome in its growth, or more easily cultivated, than the Gardenia. There are several varieties; but G. Radicans and G. Florida appear the most popular, and of the simplest culture. The flowers are white, double, full, somewhat ragged, but fragrant beyond measure. The plants grow well in a mixture, which we observe quoted in the "Gardener's Almanac" as a universal compost; and it is very nearly so. It consists of the loam in which the turf has been rotted, peat-earth of the kind so generally used for heaths, cow-dung, and a little silver sand, the quantity to be varied as the compost may require, to prevent its being too adhesive. It should be potted first in small pots, and shifted as it grows. When you desire to propagate it, you should select shoots of the last year's growth, or rather of the latest growth, which may be two or three inches long; take these off, and cut up to a joint; remove two or three of the lower leaves, so as to leave nearly an inch to go into the soil. Then take a wide-mouthed pot, and fill it, first, one-third with crocks for drainage, and then within half-an-inch of the top with the soil; let the bottom be struck two or three times on the potting-bench, to settle it down a little, and level the surface. Fill the pot up with silver sand even with the edge of the pot, and then, with a very fine Rose, that will not displace the sand, water it with soft water, so that the sand may be saturated, and the soil be fairly wetted through. Now take a bell-glass, that will nearly reach the edge of the pot, and press it on the sand so as to make a mark. Take the cuttings one by one, and put them into the sand, so that the bottom of the cutting may reach the compost, but not go into it; a slight sprinkle of water over the foliage, and to settle the sand close about the stems, completes the setting, and the glass may be put on, and placed in a common hot-bed, with a slight heat, or, which is handier, better, and requires less care, plunged into the tan in a propagating house, there being required a slight bottom heat. A shade of paper should be placed over the glass, to keep off the rays of the sun. Every morning the glass should be wiped dry, and then replaced. The hot-bed will do just as well, if the heat has sufficiently declined; but care must be taken to keep the temperature down. The best times to take the cuttings, are when the shoots have made about two inches of growth, or else, when the plant has set for bloom, and shows the difference between the blooming ones and those that will not; and this should be the guide in preference to any stated period; for with slight bottom heat, constant watching, regularly wiping the glasses, and watering the cuttings when they lack moisture, the plant strikes easily, and in a moderately short time. If any of the cuttings, when they begin to grow, set for bloom, which is a common occurrence, the bud should be picked off, as it greatly checks the growth of so small a plant; but if that be not an object, a well-rooted cutting will perfect the bloom well enough. In a few weeks after the cuttings are inserted, they will be found well-rooted, and they must then be potted off; they may be first potted in large sixty-sized pots, in the same sort of compost they were rooted in; prepare

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the pot by putting an inch of crocks at the bottom; or, if it be plentiful, you may fill one-third of the pot with clean but coarse moss, and then one-third more of compost; this leaves a third to be filled. Strike the pot of cuttings on its side gently, so as to disturb the soil a little, and then, with a piece of stick like the blade of a blunt knife, thrust in close to the side where the compost is disturbed, and raise up the earth and cuttings together, separate them carefully without breaking the roots, and holding one upright in the centre of the pot, fill up with the soil, pressing and adjusting the cuttings, so that the soil shall come up to the under-leaves, and the pots be full of the compost. Do this with the whole of them; then place them all in a slight hot-bed, water with a fine rose all over the foliage, and with soft water of the temperature of the bed, sufficiently to settle the earth about the roots, shut them down close, and shade them; in a few hours give them a little air, but not to let in wind. See now that they are kept moist until they are well established. When they have begun to grow, give them air rather more freely, and always shade them from the hottest rays of the sun. One half the plants may now be topped, that is, the heart pinched out, to form the growth of lateral branches, and promote bushy growth; but the other half may be allowed to grow their own way, as the plant is inclined to grow handsome without any assistance. This, however, makes two very distinct kinds of plants, and you may keep them both growing until the pots are filled with roots, but not matted. You may now prepare to shift them into pots of the size forty-eight, by filling them with one-third crocks, then a little compost; then take the ball of earth out whole, without disturbing, by tapping the edge of the pot in which they are growing, and place the ball whole in the larger pot, filling all round it with the same kind of soil, and gently pressing it down between the ball and the side of the new pot; regulate them nicely, and water with tepid water to settle the earth to the balls. These may be placed in a hot-bed again, made with dung in preference to any other, the heat having declined a little, and being kept up moderately by linings when it is going too low. Here they will continue to grow, and make wood. If they show bloom, use your own pleasure as to letting them flower or not, remembering that, if they bloom, they do not grow so fast. If any of the branches are inclined to grow too long, or are too vigorous for the rest of the plant, take the heart out, or a piece off, so as to keep the plants in shape; and if the lateral branches altogether are growing too long, pinch out the ends, that they may still send out more. In this way, continue to grow for size or for bloom, as you may fancy or require, and shift from one sized pot to another as the pots fill with roots, until the plant is as large as you wish; you have then only to let them flower when they will. When the plants have made the season's wood, it will be well to let them be kept rather more dry; but gentle moist heat is their delight; and although they will bear almost any treatment, so they be not too cold, and will also grow in a stove, they are far better in a dung-bed than anywhere; next to this an orchideous house; and next to this a stove. The plant is an evergreen, with shiny leaves, always looking well, whether in flower or not. In dug-beds they seldom have either red spider or bug; but in the stove they are very subject to both. The best

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remedy in that case, is to put them in a new hot-bed of a temperature fit for cucumbers, water them frequently over the foliage, and let them have plenty of steam; but in a dung-bed they are seldom infested with anything. The compost, on which a remark or two may be made yet, should, by rights, be rotted turf, such as would be cut for lawns, rubbed through a very coarse sieve, for the double purpose of stopping any very large stones from going in, and picking out wire-worms, grubs, and insects generally, which, as they fall through the sieve, are seen instantly: of this soil, two parts; of peat-earth, also rubbed through a coarse sieve, half a part; rotted cow-dung, half a part; and if this be too adhesive, a little silver sand, not exceeding in the whole a tenth of the mass, will temper it properly. This may lie together in a heap, covered from rains in general, but not allowed to get too dry. This same compost is good for almost all hard-wooded plants but heaths, which require a good deal more peat-earth in proportion to the loam. Any one who has a cucumber frame at work, can get a few slips or cuttings of this plant by purchasing them at the market, for it is in constant demand at all markets; and by following these directions can, without any other convenience, raise healthy handsome specimens.

BRUGMANSIA, AND HOW TO GROW IT.

The old Datura arborea, now often erroneously called Brugmansia, is one of the most showy plants in cultivation, and when its white funnel-shaped flowers, borne in profusion, and hanging pendently from all the branches, forms one of the most pleasing objects in the conservatory or on the lawn. The pendent disposition of the blooms renders it best as a standard, and the same may be said of the other kinds, D. sanguinea, and D. lutea, though their flowers are not half so interesting. There is, however, a double white, called Knightii, that is very curious and interesting, and should be grown in a collection. These Daturas are rapid growers, succulent, and with large foliage. The best way of propagating them is by eyes, the same as you would propagate a vine. Take the last year's wood, in fact, when the plant has done growing and flowering, and the leaves fall, the branches have to be cut back to some tolerably graceful form. When they have once attained a good size, they should be preserved, as if they were roses upon a large scale. The branches may be pruned to two or three eyes, that is, one with half an inch of wood to it. These may be potted, and placed in moderate bottom-heat, one in a small pot, or more in larger ones, and, perhaps, a good many in a larger pot would be more convenient as regards room. These must be kept moist, but not wet, and in the course of a few weeks they will begin to grow and strike root. They need not be forced along too much during the winter; but towards the spring they may be potted, one in a pot, of the size forty-eight, and should be set growing rather briskly in the stove, and if the tan be not too hot, they will be the better for plunging. They will soon shoot up, and the side buds, as they appear, should be pinched off, except always the three or four nearest the

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top. When the stem is as high as you wish for the upright of the standard, which should not be less than two feet clear of the branches, and may be as much more as you please, you pinch out the top; but you must bear in mind, that the side buds are to be rubbed off, or pinched off, as high as you mean the trunk to be, to the lower branches, and if this be two feet, your plant will be nearly three feet high, because you are always to leave three or four eyes not pinched out above those that you have taken away, because they are wanted to form the head. When the top is pinched out, the three or four side or lateral shoots not pinched out will grow fast. We ought, however, to have observed, that from the time they are first potted, you must keep continually shifting to larger pots, as fast as the roots reach the sides of the ones they are in, and the shifts should be all larger than one size; for instance, from forty-eights, you miss thirty-twos, and use twenty-fours; from twenty-fours to sixteens, then to eights, and lastly, to what are variously styled by the different potteries, but fifteen to eighteen inches across. The progress of the plant, after the top is taken off, is rapid, if the heat be genial, and as the season is advancing they become more robust. When the lateral shoots are three inches long, you may pinch out the ends of these, in the same way as you did the top of the plant; and now they will each throw out other branches, enough to form a head. These are to be kept growing until the plant flowers, merely taking away any of the shoots that are in the way of other shoots, or grow in cross ways, or spoil the shape of the head. They are not to be stopped any more, but be allowed to grow in the stove until they are on the eve of blooming, when they may be first removed to the coolest place, and then into the conservatory, where they will perfect their flowers, filling the place with their fragrance, which is very powerful, and continue to grow and bloom for a long time. The other varieties, with their red, orange, and yellow flowers, are not of such rapid growth, quite, but they require the same treatment. They grow best in loam, peat, and cow-dung, or, for want of the latter, the dung from an old melon-bed—two parts of the first, and half a part of the two latter, but this is supposing the loam to be what every florist ought to get at any cost, the turf from a loamy pasture, laid by till it is rotted. The loam is then so enriched with vegetable earth, that it will grow anything; but succulents will grow better, as well as anything else, for a little peat-earth and cow-dung; should the mixture appear too adhesive, which is not very likely, a little silver sand will correct it. If the plants are designed for the lawn, the most protected place must be selected, for the wind is a great enemy, the foliage being very large, holds it a good deal, and is far easier broken than that of a Dahlia. Standards are the best anywhere; but it is a common thing to grow the plants for out-of-doors, as you would a Dahlia. Let it take its own course, do not pinch out the eye, but let the side branches grow as well as the top ones. They should not be planted out till the end of June, and they will require stakes to support them. The first year, the plants are sometimes too tender to flourish well. If the winds or the nights be cold, they appear to receive a check, which spoils their growth, and they are best, perhaps, continued in the house, until you observe the bloom buds coming small at the base of all the leaves; then they may be hardened

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off a little in the greenhouse, and next planted out in the most sheltered of the spots intended to be planted with flowers. They may be shifted into a larger pot, and plunged in the ground, or put out in the open ground without a pot, as the cultivator may please. The only thing is, that if they are required to be potted up again, to be kept over the winter, there is less trouble when they are plunged in their pots, than when they have been allowed to ramble without bounds. At the end of the season, and previous to the frost coming, they should be taken up, and housed. If there are many, they may be removed with their balls of earth, and packed up close together on the ground, allowing no more water; and when all the leaves have fallen off, they may be cut back, root-pruned, and potted in fresh soil, gently watered, and placed again in the stove; or the ground at the back of the pit will do, until their buds swell, when they may be placed in the light. Very little more than the stem should be left when they are pruned, because the branches of the season are always enough for the head. By cutting all the branches back to two or three eyes, it enables you to select from the great number of new branches those which grow in the best direction to form the head handsome, and the rest are to be removed close with a sharp knife. There is nothing to do afterwards this season but to let them grow, just checking the exuberance of any branch that becomes conspicuously vigorous. Those plants which are bloomed in the house, are merely removed, when past their beauty, to some place where they will be least in the way; and when they drop their leaves, they are pruned, and kept rather dry until the growing time comes again. We have confined our remarks to the Datura arborea; but although we have done so, sanguinea (bicolour) and lutea will do well with the same treatment, although rather different in habit, and totally different in the shape and colour of their flowers. D. arborea has very large funnel-shaped flowers, with a bold handsome open mouth; and the double white is a good deal like it; but the other two are tubular, with a slightly enlarged and turned-up limb; the bloom is about the same length, but the same size all the way down the tube, and the lip very little enlarged and turned out, showing a small portion of the inner surface. It has been said there is a difference in the degrees of hardness, but we have had all four varieties under the same treatment, answering equally well; but we have found the blooms always more abundant from a matured plant, than from the first year's, although they bloom the first year from an eye very well. They are an ill-growing plant, if not annually attended to in the pruning, which is as requisite to the Daturas as to any plants we know of, or they would grow confused and unmanageable, too thick with branches, weakly, and perhaps scarcely throw a bloom, where there ought to be a dozen. There must be some pains taken to keep them from the red spider; but this applies to all the plants in the stove, and what will cure one will cure another; but uniform heat, occasional moisture, sulphur and water now and then sprinkled on the pipes, and, if necessary, syringed under the leaves of the plant, will prevent this. Red spider, however, rarely does mischief; the plant, when neglected, is subject to it, and it may be looked upon rather as the effect of bad health than the cause. It is no use cleaning a plant, unless it be got into health again.

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MONSTER COCKSCOMBS.

THERE are many persons who fancy they can grow these plants, and the country shows abound with gawky specimens, with small leaves, far apart end a flower elevated two feet from the pot. Those of dwarf habit are but seldom very handsome, and it is only now and then we see monster flowers close down to the pot, and leaves that cover it. Many complain of the seed, sometimes with good reason; but the principal cause of ugly plants is drawing them up too much while young. If a gardener sows in April and May, and raises a hundred seedlings, he must be content with two dozen plants. He must prick them out in poor soil, and three inch pots, put them in the stove near the light, give water only where they indicate flagging for want of it; they will soon be starved into showing their bloom, which, of course, will be very small, and perhaps the plants not more than four or six inches high. Now is the time to make choice of the best, which are those whose buttons of flowers are nearly round; take the tops of these off with three pairs of leaves and a joint below; strike these in bottom heat, light rich soil, and under a bell glass—they will strike like in a weed few days—then put them in four-inch pots, with half loam from rotted turf, one-fourth dung rooted into mould from under an old melon bed, or something like, and one fourth peat, and give them all that the balsam wants. They must be shifted from pot to pot as the roots reach the sides, be kept near the glass, and will do better in a frame with dung heat than any other way. The flower grows with the leaves, and about every fourth watering with liquid manure will produce first-rate specimens. The same plants grown on their roots would, perhaps be handsome, but not so thoroughly dwarf and beautiful,

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TREATMENT OF THE HYDRANGEA.

FEW plants show so readily the advantage of good culture over ordinary growth as the Hydrangea hortensis; in common it is a flowering shrub, with a number of heads of pink or bluish flowers, handsome and tolerably lasting, with care and proper treatment; it is a small plant with a noble bunch of flowers as large as a man's hand. The individual flowers that form the bunches are as fine and as superior as the bunch itself. The plant is not hardy, but it is at least, what is called, half-hardy; indeed, by protecting the roots with litter it may be grown like a Fuchsia in the open air, merely cutting down the branches and covering up the plant with tan or other stuff to keep out actual hard frost, for a little will not affect it. They are to be grown two ways, one for the quantity of heads of bloom, and the other for the size of a single head. The former way first:—As soon as a cutting is struck, pinch out the eye, and thus induce side ones; as these advance, pinch out the eyes of them also, that they may in turn push out side shoots, and continue in this stopping way until you have as many branches as you want blooms; meanwhile you are shifting it into larger pots as the others fill with roots, and if any branches come out where they are not wanted, they should be taken off. In this way the plant may make its full growth, and if it bloom the same season, well; if

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not, no matter; but at the fall of the year the leaves will drop, and the plant may be allowed to rest. As the buds begin to swell the plant may be re-potted in a pot considerably larger than the one it has filled, and it may be set growing. Remove all the small branches that look weakly, and shorten any that have grown uncouth and out of shape and keeping with the rest of the plant; gentle heat will force them earlier; but the greenhouse is the proper place for healthy growth, let the plant have plenty of air and light, and it will continue to grow without drawing; but if you neglect these two points, the plant will become drawn and awkward and not support the heads of bloom well; the flower will soon show, and the watering must be attended to very regularly all the time the heads are swelling and the flowers developing themselves. If the green-house light is only in front, the plant should be turned every two or three days, all the time it is growing, otherwise it would get one-sided and ungainly. The flowers of the Hydrangea are growing the whole time they are on the plant and in colour, but when that begins to fade into a green like the leaves of the plant, they grow no more. On this plant you may have as many heads as you please, but you can never form the heads so large as when you grow only one upon a single stem. As a garden ornament the Hydrangea is very noble, and there are few subjects prettier than these plants in a border. They may be turned out of pots as early as May, and will grow far better than even in pots, if the stuff they grow in is good. Cuttings may be taken in the autumn, and being cut up to a joint may be struck in a cold frame; when potted out singly into pots of the size forty-eight, they may be allowed to grow with a single shoot; and the other buds should be rubbed off before they can grow to weaken the plant. As soon as the pot is filled with roots change it for a size thirty-two, and after that to a twenty four, in which a single head will perfect itself well. With regard to the stuff in which they are to be grown, it is usual among those that fancy them much to have them in different composts, some grow in loam and dung, half and half, others, with loam, peat, and dung in equal proportions, a third peat and dung only. The flowers will be differently shaded in these three composts, and some will be weaker than others; but different style of growth is pleasing where people want a variety. With respect to the colouring of the blooms, we have seen the same pot of cuttings produce in turn, blue and bright pink, without being able to fix upon the agent which caused the change, but we have suspected it to be in the peat earth, because those planted in the common borders grew well, and bloomed with pink flowers, and those which were in the peat bed among Americans had blue, and very strong blue; it was natural, therefore, to infer that there was something in the peat that had the effect of changing the flowers to a blue. Many recipes have been given by various gardeners for turning the flowers blue; but up to the last we have seen every one fail, and also seen the plant give blue flowers with the recipes applied, but that there is some combination, at present unknown, is quite certain; and we know from repeated trials by ourselves and others that all the known means applied one year when the flowers have come blue, have been applied the very next year and failed, so that there is no certainty at present, although experiments will one day reduce the matter to a certainty. When these plants get large

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all the branches must be pruned back, that they may throw out young shoots all over, and be well-furnished plants every year. If planted in the garden in the middle of a clump, or on the lawn, a regular framework of good strong willow sticks should be placed over it, that it might be matted through the hard weather; it will save a good deal of the wood that might otherwise be cut down in a severe frost; and when the plant is springing, pruned afterwards, in a way to form a good bold bushy plant. The large size it acquires in two or three seasons is astonishing, for when it once lays hold and establishes itself in ground that agrees with it, the plants soon becomes enormous bushes; all that need be done is to cut in all the branches to clear half or a third of the quantity of eyes, that they may all be induced to shoot. There is scarcely anything looks more showy than a very noble bush of it in good flower, and we have seen them ourselves with three hundred heads of bloom, the bush being six feet through, all bushy alike to the ground, and a head of bloom at the end of every shoot both principal and lateral. It is worth mentioning one more circumstance in connection with the colour of the bloom; a plant was put out on the lawn, a hole being made by taking out nearly a barrow full of loam, half of this was mixed with as much peat earth, and the plant placed in it; for two seasons it bloomed blue, the third season it had become very large and all the blooms were pink; our conclusion was that the peat made it blue, and now it had got through that into the plain loam and thus resumed its pink. There is, no doubt, something in peat which causes the change, but then all peat is not alike.

POTATOES.

A QUESTION is asked, whether it is possible that autumn planting can be so good as spring planting? This may be settled by asking another:—Can you keep potatoes through the winter, and until the time for spring planting, without growing? If you can, spring planting will be as good as autumn; but if, as we almost always see, the tubers shoot, and on opening a pit, bushels of the white shoots may be found, the tuber cannot be so strong as if it had not shot or grown at all; therefore one essential being the retaining of the whole strength of the tuber for growth of the planting, we say it matters but little what is the period of planting, so this necessary condition be secured, But certain it is that one half—perhaps nine-tenths—of the disease in potatoes, and failure of the crops, may be attributed to the condition of the tuber when planted, and not to the season of planting, nor the nature of the soil; for as the haulm is more or less a conductor according to the state of its health, it is more or less subject to the electric stroke which causes the disease. The objection to autumn planting is the danger of early growth and spring frosts; but if the mildness of early spring bring them up prematurely, it is only required that a few hands be set on to earth up the rows well, and cover the tops. Nevertheless find a mode of keeping the tuber without growing, and then the later it is planted the better. Autumn planting in some situations is a choice of evils.

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DRAINING WHERE THERE IS NO OUTLET.

We do not suppose there are many gardens situated so unfavourably as this; but there are thousands of plots of ground occupied as gardens which are not only undrained, but which have no outlet for water, if the draining operation were performed. This is the worst position that a garden can be in; and, do as we may, they cannot be drained effectually. However, much good may be done, and by no very costly means. Select the lowest part of the ground, if there be any difference, where to sink a reservoir, or what may be termed a pond. If the land be clay, it will only need to have the sides a little sloping. If it be light, sandy, or peaty, the sides must slope much more. The time for the operation must be when the land-water is lowest, the work being continued till you come to water each time you set at it; and when that has gone off, to leave it dry, or comparatively dry, commence again, until you get it as you require it; not less than four feet, and five would be better. Make a drain along the lowest part of the ground, three feet six inches deep, leadingin to this reservoir; or, if the ground be such as to warrant it, let the reservoir be a proper ditch, the length of the lower end. Let there now be other drains made from the further parts of the ground to this main drain, or ditch, whichever you have adopted; these to be three feet six inches deep at the lower ends that come into the main drain, and to rise no more than is actually necessary to make a run of water, the shallowest not being less than two feet, or two feet six, if it can be had; these drains should run parallel, and one rod apart. All these drains should be made tapered to a point, thus V. The drains may be made with pipes of two-inch bore, laid end to end; or, if these cannot be had, with large stones to fill up eight or ten inches of the drain, leaving, as they will, a run for water at the point. and forming, as they will, a run through the stones above. If neither large stones nor pipes can be had, get faggots, clippings of hedges, and such like open stuff, to occupy the drain as high up as we have mentioned; or, if none of these can be had, cut the earth where it is stiffest into large lumps, so that when they are put in, they will not go to the bottom, but leave a vacancy. When the best has been done that can be done, under the circumstances, for the preservation of a run of water, let all the drains be filled up to the surface, and a little above, to allow for settling down a little. But it would seem labour in vain, if, in spite of all this, the reservoir gets choked up nearly to the top with water, and all the drains are full, which of course they must be, whenever the only outlet they have is choked up. But now comes the question of the good that is done by even this apology for draining. All the water that is used for watering the garden may be taken out of this reservoir, and, if there be labour at command, this may be done rather copiously; and although you cannot remove the liquid fast enough to make a serious difference in the height in the pond, the water in the drains continuing to supply it as fast as you take it away, the water is not stagnant altogether, and every gallon that they are relieved of is immediately supplied by the circumjacent moisture; and this little movement, slight though it be, is of the greatest service. Again, as the land-water decreases,

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which at some portions of the year it will, even to the almost emptying of the pond, the land is actually relieved for a time, and the air, which does so much service to the ground, will find its way up the drains; and, imperfect as this partial drainage may be, the produce of the ground, as compared with what it was before it was done, will amply repay for all the labour bestowed upon it. Of course, if there be an outlet of only the top few inches of the water, it is still better; but we wish it to be understood, that if there can be no other relief than what is given by the constant use of the water for irrigation, some essential service is rendered. How many thousand plots of ground, however, are there, where there is every convenience for draining, but where it is nevertheless neglected! And yet florists, professional as well as amateur, complain that their Ranunculuses fail, that their Tulips do not succeed as they could wish, that they cannot grow Polyanthuses, that their Pinks make no grass, and are often lost, that their Roses do not bloom finely, and so on, *ad infinitum*, through the whole range of flowers that grow in beds and borders. In nine cases out of every ten, the fault is in the stagnant water beneath. How necessary it is, then, to drain their ground in the best way that circumstances will permit; and yet how difficult it is to move them to that very necessary operation. Volumes have been written, newspapers have been stuffed, essays upon essays have been published, with the best information upon the subject of draining, without, or nearly without, effect as regards farms, and almost entirely without any corresponding benefit among gardens. It is true, there are many productions of the garden which flourish in ill-drained ground. The Tuberous iris and flag tribe grow healthy and robust, but they would do the same in a swamp; so that it must not be imagined that, because they do well, the Bulbous iris is to flourish also. The finest collections of the English iris —so called because they have seeded freely and been raised abundantly in this country—have been known to dwindle away to nothing; while the Sword-leaved, Tuberous family have increased beyond all management. Nor must it be supposed, that where the large and coarse varieties of the Ranunculaceæ grow vigorously, the garden Ranunculus must necessarily succeed. There is no affinity between the florists' improved and necessarily more tender kinds and their coarser predecessors or relations. The Brier will flourish where the more splendid varieties of Rose would die; and although many will flourish when grafted or budded on the Dog-rose, there are many that will not succeed at all. In short, if we were to write for a week, we could not too strongly impress on the minds of gardeners the vast advantages derived from draining. We have known a lawn to be studded with fine shrubs, that have, after a while, stood almost still, and, after a little longer interval, begun to dwindle. We have seen the same lawn drained, without disturbing the shrubs, and witnessed more growth in a single season than they had made the three previous years. We have seen that lawn in summer time as brown as the dead leaves that fall about in autumn, for want of draining, although it was a swamp in winter, and after rain; and, after the operation, it was never wet, nor was it ever off its fine green colour. But the same thing may be witnessed in a hundred places, if the same means be used. Having shown how undrained and apparently undrainable land

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can be improved, under the most adverse circumstances, we shall touch upon the various modes adopted for the operation of draining under more advantageous features. The more complete and the deeper an outlet can be made for the superabundant water, the more complete will be the drainage; but something can always be done to help land. One of the evils into which many fall, is draining too near the surface. A stiff clay field of eight acres, on the side of a hill, and a lawn of two acres adjoining, but lower down, were some months in the year so wet as to be almost impassable on foot, and the feet of the cattle at these times would sink eight or nine inches deep. A man who had been employed in the neighbourhood to drain, was set to work at this; and finding an easy and pleasant descent, and the water so near the surface, he undertook to cure the evil by drains made diagonally from corner to corner, there being a capital outlet at both sides to a ditch of almost any capacity. The drains were two rods apart, and twenty inches deep, formed with flat sole-tiles, and an arch-tile on them. There happened a dry winter, and there was not much inconvenience: but under the scorching summer's sun, the earth cracked as heretofore; and the next being an ordinary season, there was not the least difference perceived. We were applied to for advice; ordered drains straight down the hill, to a cross-drain, large enough to take all the water; and, as expense was an object, we proposed trying the drains at two rods apart first, because there would be no expense lost, even if we had ultimately to make one between every two. The drains were made three feet six inches deep, and, before a tile was put down, every drain had a complete and copious run of water. Two-inch round tiles were laid at the bottom, and, as there happened to be on the field the clippings of the hedge, which had been neglected, some of the bushes were put at the top, and then covered in with the whole of the soil, the turf relaid, forming for a time a complete bank along the surface of each drain. The run of water was complete; the drains run as freely now as they did when made, some years ago, and the ground seems of an entirely different nature: there is no cracking in hot weather, or softening in wet; the cattle make no marks, although, as it belongs to a private family, the season for feeding it is very little studied: and the drainage at two rods apart is sufficient. The men who made the drains sadly remonstrated against our orders for straight drains down the hill: they had been always used to diagonal drains on the side of hills. Common sense, however, ought to inform men, that the more rapidly the water runs away, the more room is made for other water to fill the pipes, and that the greater the slope, the more rapid the fall. Some of the most antiquated notions regarding draining prevail in some places. The idea of our ordering three-feet-six drains, to which the labourers said it was impossible for the water to sink! They forgot, or had never considered, that if a pipe was a mile high, and the bottom half-inch cut off, the top half-inch would evidently fall half an inch as well as the bottom one; and so it is in draining. Run off a two-inch bore full of water from the bottom: it is immediately supplied by the nearest, whose place is filled by the next, and so on. The top must follow, and fill up the vacuum formed by the absence of any below, so that the effect is more instantaneous than many people imagine. Again, water will fall much

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more rapidly than it will travel sideways. If, then, a drain is made near the surface, it has very little to receive from above, and it can only take beyond this some of the side water in its immediate vicinity; but if drainage be deep, all immediately above falls perpendicularly, while right and left it comes in a sloping direction from a distance commensurate with the depth it has to come. Many fall into an error, which cannot be too speedily got rid of—that, if ground is on a hill, there can be no good in artificial draining, because there is a natural drainage. Nothing can be more erroneous than this opinion. Springs rise on the side, and often on the top, or near the top, of a hill, and form swamps where you would think it almost impossible to retain water; and there is, in fact, no getting rid of it without properly draining it.

THE GARDEN DAISY.

The double varieties are the only ones cultivated in gardens. They may be classed among the very few subjects that form good edgings to beds, borders, and clumps. They are constantly spreading or increasing by off-sets, which root of themselves, and therefore separate with the greatest facility. They may be planted for edgings four inches apart, and in one season they join by spreading. They grow in any kind of soil, and bloom freely half the year. There are many very distinct varieties; from dark red to white, with stiff quilled petals, and others of the colour with flat but narrow petals, making a better formed flower. There are also monster kinds of flowers with small blossoms all round the large one; they are commonly called Hen-and-Chicken Daisies. The roots should be parted so that there shall be only one heart in any piece; those may be planted out in beds six inches apart, or on the edges which they are to form four inches apart, merely being dibbled in, and the earth well closed about their roots; and here they may remain until they are too thick; these roots are generally quite large enough to part into half-a-dozen or more separate plants, by merely tearing the hearts asunder with their roots to them, and if any of them happen to come away without any root, it will soon strike new ones. In forming edgings regard must be had to the colour and seasons; they ought not to be mixed, but when used for edgings to geometrical or uniform gardens, the different colours may be used to the different beds, taking care that the same colour is used uniformly to give a proper effect. Thus, if the beds be formed in series of six alike, not less than three should be of a colour, and those alternately; if they are in series of eight, they should be four alike, and they alternately; nothing is more offensive to the eye than an awkward and ununiform disposition of colours. If this neglected plant, however, were not so common, it would rank before a hundred less brilliant subjects and less permanent bloomers, for it possesses some advantage over many; its extreme hardiness, its indifference to where it is placed, in what it is grown, and the length of time it continues in flower.

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ROSES AT SHOWS.

We are glad the plan of showing single blooms has been resumed in the country, and we strongly recommend all societies to follow the example, as a piece of the greatest service that can be rendered the floral world at the present moment. The Rose growers have had a pretty good fling. They have been allowed to go on selling hundreds of varieties that were unfit to grow, and have been actually retrograding in the quality of the varieties they sent out, until the purchasers have reason to complain of gross imposition. It is true, that the mode of exhibiting them in bunches has greatly encouraged the spurious and worthless varieties. A bundle of flowers shown together may look gay, according to their colours; but they are so squeezed together that, if they were of good form, the form would be spoiled, and the bad form makes as good a bunch to look at as the better ones. But let any one look round the scores of bunches that may be seen at the great exhibitions, and see how few there are that have a round form, a plump face, a thick petal, or any other of the good properties which we are taught belong to a Rose. The effect, however, of showing single blooms will be magic, and good florists will be disgusted with three-fourths of the Roses now in cultivation, and those who order them for the future should distinctly require a guarantee that they will bear showing as single blooms. No others, in fact, should be grown, but such as have some very distinct good property. A flimsy-petalled Rose is not worth the room it occupies. It is fit only to make a garden in a litter, and keep the borders and beds untidy. In some of the catalogues we have observed an attempt to describe Roses; and we are not a little astonished at the effrontery with which we are told, that such and such a Rose is a show-flower. A friend of ours had last year ordered a collection by marking a catalogue, and he put his mark to every variety so designated. It happened, that after he had given his orders, we saw his list, and while we admired his spirit, we deplored his folly. The Roses came, and, of course, three-fourths of them, although described as show varieties, were downright worthless; and without attributing any improper motive to the dealers in Roses, we must protest against any indefinite description as "show Roses," until they learn what a show Rose really is. If one-half, and more than one-half, of the Roses so called were discarded altogether, the list of show varieties would be improved; but even then, there would be many that deserve no such character. Let every exhibition have a class of single blooms, not single stems merely, but actually single flowers, and we should soon see the kinds that ought to be appreciated, and those which ought not to be grown. Some very indifferent flowers might be cultivated for their colour, and some for the habit of the plant in the season of blooming; but nine-tenths of all that ever were named or sold could be well spared, and Rose growing would become a pleasing occupation. We, therefore, strongly recommend everybody to promote the showing of Roses like Dahlias, and abstain from buying any or growing any, but such as will stand that test of their merits.

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THE PROPERTIES OF FRUITS AND VEGETABLES.

Although it is not in our province to occupy much room with anything but flowers, this is a subject which more or less interests many thousands of cottagers and gentlemen's gardeners who exhibit at country shows; and we merely announce that we have completed the above work, and that it will be published in a pocket volume. Before, however, we ventured to give it out to the printer, we summoned a jury of cooks and gardeners, and submitted our dogmas (as some people called our "Properties of Flowers") on the desirable qualities of fruit and vegetables, and they were unanimously pronounced to be all that could be desired. The jury, however, like the old florists, considered that very few things came up to our standard; but on the ground that the nearer they came to it the better they would be, it was admitted, that they could not fail to be as acceptable to the growers as to the judges—that they would lead to uniformity in the decisions, and form excellent lessons to exhibitors. The work is published by Houlston and Wright.

SELF-MANURING.

At the Derby Arboretum, I observed the mowings of the grass swept into the little circular bed which each tree stood on and there it was left to rot, and other mowings were swept on half-dried or decayed grass of the sweep before. I wanted to know the reason for this strange practice, and was told that it was always intended for the Arboretum to manure itself. I said I thought it a very dangerous plan; that being thus choked up with decaying vegetable would kill many things; and I pointed out a number that were dying or dead, not by any sudden cause, for there was canker and mildew, and every symptom of ill-health and gradual decay. The man said the instructions were positive, and at the fall every tree had its leaves swept together round the stump, and there they decayed; and, he added, "it's the most natural manure, and all they get in their native forests;" but I asked him whether any body took pains to sweep the leaves from where they did some good, into heaps round the stumps, where they did no good: and also whether he considered the rotting and fermenting mowings of the grass were at all akin to the leaves of the trees themselves? He evidently had not his lesson perfect, but he fell into a sort of conclusion—"Well, sir, them's my instructions, and I've nothing to do but follow 'em;" after which I merely requested him to turn over the apparently half-dry grass in one of the clumps. The bottom was soddened and close, perfectly impervious to the air, and completely shut it away from the root of the plant. I said, by way of parting words, "when I call again, the plant and twenty more will be dead, if this pernicious practice be not discontinued." I called afterwards; I found it had been modified a little in some cases, for there were vacancies in the clumps. They were not quite covered over, but a good deal too much. If these things be for nourishment, rake them into a heap, and when they are rotted into mould, wheel them in and spread it over the surface.

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STOCKS FOR PROPAGATING BY BUDDING AND GRAFTING.

THE great call for these articles has made it somewhat difficult to procure them anywhere but at the nurseries; and when you consider you can pick and choose, at some price or other, the nurseries are the best places for an amateur to purchase. In some parts of the country the Briers are plentiful; but they are mostly in hedge-rows, and it is somewhat perilous work to grub them up without permission; nevertheless, many men get their living by collecting these for the nursery grounds. The stocks should be procured at the fall of the leaf, and be straight, strong, well rooted and compact. These should be placed in rows, eighteen inches apart from each other, and three feet or three feet six inches vacancies between the rows; they should be staked, or, which is better, stakes should be put at equal distances, and a rail along them, to which rail all the stocks should be fastened by strong ties, the whole being well trodden in, after the same manner that new Roses are planted. The preparation of the roots should be in all respects the same, and the stocks are generally shortened before you get them to the height their growth best adapts them for. Here they remain till they begin to push in the spring, when all the lower buds must be rubbed off, leaving the three or four that are highest up the stock, to see which will grow best. It will be found that some of these stocks have died down to a considerable distance; but as they are not of the slightest use above the top growing bud, you may, with a strong knife, cut right down to the bud, or leave it till after the summer growth of the buds has considerably advanced. If you have one good branch, it will do; but two on opposite sides are better, because you can work both, and be safe, if one fails. Several times you must go over these stocks, to rub off the fresh buds that will be springing out on different parts of the stock where they are not wanted; and two good buds near the top are all you need save. You have to remember that all the strength of the plant will go into these two branches, if the others are taken away; but that every leaf that is allowed to grow, besides those wanted, takes greatly from their strength, on which strength the value of the plant entirely depends. If the top shoots or buds happen to be weak in the first instance, compared with some lower down the stock, it is better to rub off the top, and lose a little height of the stock, than to trust to dwindling branches, so that, in this case, your two branches to save might be half way down the stem; and it is better, in such case, to cut down at once to it, that the top may be no more trouble, and may not mislead you, in going over them a second time, to cut or pull out your best branches; for the top, so long as you left it on, would be throwing out its green shoots; and being the same height as the general run of them, nothing is more likely. All that is to be done, besides keeping the stocks from throwing out other branches, is to cut away from the roots any suckers that may come up, and which distress the stock nearly as much as dwarf branches. The ground, of course, is to be kept clear of weeds until Midsummer, which is the season for budding, and which is the next subject for consideration.

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FOURTEEN YEARS AGO.

In the GARDEN ALMANAC for 1848, we said, or rather wrote:—"It matters but little what we attempt, what we strike out anew, or what we succeed in, there are people who think they have a right to purloin from all our literary stock-in-trade; and, we are ashamed to add, there are plenty who encourage them and buy their stolen goods.—Newspaper! There was none for gardeners until we made it. Dr. Lindley and Mr. Paxton, who had been writing for years without giving the public anything that was adapted for general readers, imitated our title, our size, form, and even the plan. GARDENERS' ALMANAC! There was none until we gave them one in 1837, and Mr. Johnson copied the very words of the title. There was no standard of merit for flowers and plants in the least defined or understandable, or founded on principle, until we published our PROPERTIES OF FLOWERS AND PLANTS, and our ideas were immediately stolen by Wood for the *Gardener's Chronicle;* by the BURY FLORISTS, to publish as their own; by a shabby custom-house clerk to pass off as original, and by "*a friend!*" save the mark! for the *Gardener's Journal*, to impose upon the readers as the work of his own brain. Truly, we ought to be proud that we take the lead in such matters, and that people who pass for honest, turn thieves to deprive us of our right—our family of their bread; men risk the degradation which they richly earn, to seem what they are not, and assume the merit of originality among those who are ignorant of the real author. Our thoughts, words, and works of other kinds have been stolen or imitated quite as industriously as our writings, but not to our pecuniary injury. We no sooner established public shows in the metropolis, than they were also started at Chiswick; and every improvement in their once crude and unsatisfactory management was adopted in imitation of ours, or in consequence of our remonstrance: can we be more flattered? Envy, hatred, and malice, and all uncharitableness has, however, pursued us in revenge for our going a-head of all; and even this Almanac which gives the tone to Floriculture all over Europe and America, has often roused the leaden energies of literary pilferers, who proclaimed their ignorance and inferiority by threatening a similar thing, and charging more than it was worth—HALF-PRICE.

"Be it so; one day the people who have lent their aid to the locusts who live on us will see the injury they commit, and we shall reap the advantage of our originality in the tardy justice awarded to our services, which we have a right to assume have been useful, or so many knaves would not be sacrificing their claims to the title of men and gentlemen, by the desperate attempt to live on our gardening reputation. But, if needy and envious adventurers rob us, on whose pen depends a large family, the public ought not, surely, to encourage such a system.

"We believe, that if every amateur in the kingdom knew the sacrifices we have made for the trade, the British gardener, and the Floricultural world, and the meanness of those who seek to live by our literary and floral credit, there would not be a solitary buyer of the spurious article; and, we are sure, that by abandoning the work founded on our property, and leaving the pilferers unsupported to their unworthy occupation, they

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would soon prove to the world that—'If there were no receivers, there would be no thieves.' We, however, must 'bide our time." When that may be, we know not; for men once respectable fall one by one into a system of fraudulent trading in plants and flowers, and our hostility makes them enemies, for we stand alone in telling them very plainly that morally they are worse than pickpockets, and far more cowardly. How then can we hope for much better treatment, every paltry bookseller's hack who can read, merely disgraces our writing, and calls it his own. Every fraudulent dealer is an open enemy. Amateurs and gardeners should remember this, and support our works. G. GLENNY.

REPORTS OF SHOWS.

WE have greatly offended a simpleton of the North, by not doing impossibilities. The secretary forgot to furnish us with a report of the National Tulip Show, and, therefore, we could not insert it. Now, our readers are quite aware, that we are anxious to insert every report we can obtain; and we have often requested the members of floral societies, and gooseberry growers, to forward us the particulars of their exhibitions. The work is intended to advocate floriculture in every way, to promote the advancement of the science, and inculcate, as well as we know how, the necessity of showing and dealing fairly. Nothing tends to do this more than advertising the shows and publishing the reports. The secretaries of societies can furnish these more correctly than any other persons, and we are sure that nothing is more gratifying to exhibitors, than to see what flowers win, and who are the successful competitors. Ever since the beginning of the year, the work has been conducted as if rational and thinking men were readers. The numerous contributors have been selected for their ability. The entire literary department has been occupied by a more elevated style of writing, and scores of letters of approval have rewarded us for our labours. But we regret that we have missed a single report; but we cannot reconcile ourselves to borrowing from other works what we think ought to reach us officially. We hope, therefore, the members of floral societies will second our efforts, by sending us in good time the reports of their meetings, and whatever else they may desire to see printed in the MIDLAND FLORIST.

TREE MIGNONETTE,

To obtain this to bloom during winter, a few plants should be raised during the early part of the summer, and grown singly in pots with care, in a frame where they could have the full influence of the sun; they must be repotted as often as is found necessary, in a free open compost of sandy loam and leaf-mould, and all the flower-heads that appear during summer must be removed. In winter they must be removed into a greenhouse, and will then produce plenty of blossom.

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SEEDS AND SEED SOWING.

BY GEORGE GLENNY,

Editor and Proprietor of the first Garden Newspaper.

Nobody can accuse us of selfishness; for not only do we freely tell our brother cultivators all we know that can do them any good, but we have fairly devoted ourselves to the improvement of flowers, and freely sent out anything that we think better than other people's. In no one instance have we attempted to profit by anything we produce or procure. We do not deny that when we competed for prizes we did endeavour to keep all the advantage of good novelties to ourselves, and to use all honourable means to render our productions superior to those of our competitors; but, after beating everybody in our neighbourhood worth beating, and even at some distant places, for three years, during which period we won three hundred leading prizes, we retired, and from that time to the present our object has been to impart to others all we could, to encourage young beginners, and, from time to time, to answer all questions put to us by those who desired to improve; to progress, as well as we know how, in the production of better races; and, instead of keeping to ourselves all the advantages of novelties that could be raised from our well-saved seeds, we have sent them out as freely as other persons have distributed the most common, and to florists the most worthless. But some may fancy that we charge a tolerably good price. Be it so; the only question is, what is the cost? and if a florist can be induced to part from seed likely to yield a good novelty, what does he charge? We only know by having, as agents, to procure some at different times when we had none to spare. Two guineas for a single pod of carnation-seed seems a tolerably good sum, we think; and yet, looking at the quantity you may sometimes grow without getting much seed, it was paid cheerfully by the gentleman who employed us, though upon opening there appeared but thirteen good seeds. What was the result? why, that the gentleman for whom we procured it thanked us for as many double carnations, which "he would not take any money for," and certainly three or four very desirable; many worse have been sent out at high prices. But we never liked, for ourselves, to give high prices for seed, because we have been deceived so often; yet there is a vast difference between thirteen seeds for two guineas, and fifty or sixty seeds in a three shilling packet.

The seeds of all this tribe, Pinks, Picotees, and Carnations, are the more difficult to obtain in proportion to the doubleness and

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high breeding of the flowers, and we do not think that, apart from the satisfaction of sending out what nobody else does, any price would pay a man for seeds saved from first-rate flowers. We have this year taken all the pains we could with Pinks, and from some hundreds of plants, of the very best sorts only, we can hardly fill a thimble. Can anybody imagine what sum would pay for this? yet it will go to a few amateurs for, comparatively speaking, a trifle. Certainly, three shillings for fifty or sixty, or say a hundred, grains of seed, appears a large price, when we can go to any seed shop in London and buy as much for sixpence as would produce thousands of plants. But in one case there is a moral certainty of more than half being double, and some of them first-rate, and in the other, not a double one could be found in half-an-acre. How long will a man be getting rich upon growing geranium seed from the best varieties at five shillings per hundred? Why, we defy him to bring himself home by selling it! Apart from gratifying his ambition to stand high, there is no motive to sell; his only chance of profit is by growing it for himself. Let us take the Balsam as a subject for money getting. If we sold all that would come, or rather, if we attempted to sell, we might make money at five shillings an ounce, and what would it be good for? it would be like that of the seed shops. But let any one do as we have done—select from their collections only those flowers that will not throw back, and save only those pods that come from flowers too double to let a fly peep into the centre, and they will find very few pods to a plant, and very few plants fit for the purpose. Our last Balsam seed was saved from a hundred and fifty plants only, but they were selected from twelve hundred, the very worst of which twelve hundred were fit for showing; but they were not fit to save seed from to be guaranteed as our "improved." A good deal of seed was saved from the rejected plants, and given to a dealer, but we would not own it for ours.

Pansey seed is treacherous; the strong hold that dame Nature keeps on this plant, the facility with which it seeds, and the disposition to run back to the original state, makes the very best seed yield many bad flowers, with doubtless some good ones, but the constant struggle to assume its favourite weedy state renders it difficult to advance much. Nevertheless, there is one way to get a chance, and that is, to save seeds from the best flowers only, on the best plants, with nothing inferior near them. With regard to good Dahlia seed, it must be saved from perfect flowers, and the petal seeds alone should be rubbed out. We have found from actual experiment that disk seeds bring single blooms, or rather, never bring double ones; so, if we desire to save Dahlia seed properly,

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the best early flowers should be marked for seed, and all inferior ones should be cut away as soon as they are seen to be so; and in gathering, none but the marked ones should be depended on. It matters not what seed is wanted to give us a fair chance of good novelties, we must be content with a twentieth part of what we might save in the ordinary way, and therefore, although it pays anybody well to save it for the chance of new and good varieties, it will never pay to save it in the same way for sale, unless from a desire to serve the amateur. But it is better to pay any price for such seed than to be obliged to grow a hundred plants for one chance. But when any one fancies that a shilling profit can be made by thus catering for amateurs as we would produce for ourselves, we have only to recommend him to try, and when he has done his best for a supply, calculate whether he can set any price upon the few he may be able to save. If we are asked how it is that we are so willing to throw away the chance of raising new and good varieties, we answer that our desire to encourage the amateur to be self-reliant, and to show him that he may be so, is much stronger than our ambition to shine in novelties, now that we have done exhibiting; and if a man is fairly started with a pinch of good seed, and is told how he may the next year save for himself, something is done towards advancing floriculture. No one can doubt our having done all we could to promote this great object.

Had those who are so conspicuous in the sending out of new things been content to charge moderately, and to send out only what was good, things would have been very different; but such is the cupidity of some men, that even the adjudication of their own Society, as they call it, was not enough to satisfy them. They sent half-a-dozen flowers to be submitted to the judges, their own paid creatures; one flower had a first-class certificate, another had a second, and a third was recommended; the other three rejected. Reasonable men, if they had faith in the judgment they invoked, would put three different prices for the first, second and third, and not send the other three out at all, but how did they try to impose on us? Why, sent the whole out at the same price, and staked "their reputation" on all being first-rate show flowers. Although, to people who knew them, their "reputation" is a very poor stake, and is anything but to be envied; there are hundreds of new beginners every year, who do not know the vendors, and who never dream that men in a decent position would wilfully pledge themselves to a falsehood. These are the victims, and it is these whom we entreat to abstain from buying novelties, particularly whole sets of novelties, at the novelty price. It is these whom we would induce to save their own seed, and raise their own flowers. It is these we

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would recommend to congregate, and let their own good novelties out to each other. Floriculture is rapidly creating two parties—the cheated and the cheats. We have chosen to battle for the public, and for the honourable portion of the trade; for there is not a nurseryman out of the clique that has not been victimised. All we have done, and all we could do, was to caution people against buying novelties from the vender's descriptions; unless they have positive evidence of the quality of a plant, they should wait till the next year. We have been taunted by some of the noveltymongers with having condemned a flower one year and recommended it the next; but is there any inconsistency in condemning flowers when they are half-a-guinea each, and recommending them when they are half-a-guinea a dozen? We say that four out of five of so-called novelties are not worth more than half-a-crown the first year, and all they are charged beyond that is gross imposition. Well, then, may we caution people against feeding the cupidity of a few florists, who positively live by fraudulent dealing; and we would, and do sacrifice a good deal to induce growers, especially distant nurserymen and gardeners, to raise novelties themselves. We have succeeded in many instances, and in our travels (we have often been a thousand miles in ten days) we have been delighted to see many who have an excellent collection of hollyhocks from a shilling packet of seed.

"Facts are stubborn things;" and these facts stare us, and hundreds of others, in the face. The hollyhock is a grateful plant; only save the seed from good flowers, and you have a large proportion as good as the parent. Our plan with other people's seed is a safe one, but we have lost a good deal by it. We take guaranteed from anybody that we think will not deceive us, and who we think does not deceive himself. We prove it by sowing a pinch ourselves. If it prove right, and will give a reasonable hope of new and good varieties, we cannot say too much for it; if wrong, we throw it away, and of course lose our confidence in the seller, and all it cost. This particularly applies to seed from Germany. Say we buy half an ounce each of all the varieties of stock. Of twenty-four different kinds, some eight or ten come fully to our desires, the rest are inferior; we can warrant the good, and the bad is thrown, or given away. It is easily seen that the good has cost us more than double, nearly treble its own cost, and must bring us home by going out at an increased price. The same with Asters. Although agent to two first-class German houses, we were not satisfied with all their assurances of quality, but had enough to enable us to try them, and to retain for our friends, the amateurs, only such as proved right. What goes of the rest? They must be given or thrown away. We find our account in this sacrifice, because nobody begrudges the price of good seeds.

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or good plants; it is worth something to be assured that the beds you will fill will not be discreditable. Nothing will compensate a gardener or amateur for a bed of Stocks or Asters turning out single, or wrong colours, or inferior in any way. If the original German packets are wanted, we can send them, but we do not want to turn seedsman. We confine ourselves to those few things that cannot be had of seedsmen; as we have said before, we must prove the seed to be worthy of an amateur's care and attention before we send it out. So much for cheap seeds: but such has been the result of the best, that if we were ambitious to raise new varieties, no money should purchase a grain out of our hands.

We intend publishing a list of seeds, containing very few sorts. First, the seeds that we shall guarantee, on our own credit and knowledge, to be as good as it is possible to save with all the caution and means that can be used; second, those which we have proved to be far better than any dealer can command, but which we may be able to improve upon; third, seeds of the few subjects that we recommend amateurs to grow instead of wasting their time and grounds upon a great number of weeds with fine names, that fill up large catalogues and puzzle the best growers and gardeners; but these latter subjects claim scarcely any credit for their quality, because all respectable seedsmen can pretty well guarantee their growth, and there was and is but little room for improvement. Of annuals there is a vast field to cull from, but how many are of inferior quality? Most of them possess but little merit, because they are deficient of all striking properties. We recommend the following points as worthy of consideration in choosing:—First, the plant graceful; second, the bloom abundant; third, the colour bright. Now, these three are most essential, and they are conspicuously possessed by the Balsam, Aster, Stock, Nemophila, Coreopsis, Erysimum, Larkspur, French Marigold, Lupin, Zinnia, India Pink, Convolvulus, Sweet Pea, Phlox Drummondii, Acroclinium, Cockscomb, Candy Tuft, &c. Mignonette has no brilliance, but its perfume will always secure it a place; and really if the first garden in Europe were restricted to these very few annuals, it would be much gayer than it would be with greater variety, for to go much beyond them the effect would be lessened, however much the curiosity might be enhanced. For small gardens it would be downright folly to increase them much. We know but few things that are so bright or that afford so fine a contrast. Where then is the use of multiplying varieties when for every patch of these we have to forego a patch of the brighter and better subjects? As a closing remark, let us impress upon the mind of the decorative gardener, and the amateur in particular, that colours are most effective when well distributed. If each sort of annual is grown at equal dis-

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tances, a foot apart, in all the borders, the eye commands, as it were, the whole space within its limits; it is not riveted to one spot at a time by any predominating colour; but red, blue, white, and yellow are distributed along the whole border, and the effect is complete. When we see advertised a hundred annuals, we wonder any simpleton can be found to buy them; suppose they were only sown one foot apart, the last would be one hundred feet from the first, the dull miserable weeds would take up the largest portion of the garden, the bright and effective subjects would be sacrificed to make room for others hardly seen a yard off, and the main object, the display of colours, would be defeated. A dozen subjects well chosen would be lively the summer through, and aided by Geraniums, Verbenas, Calceolarias, and Phloxes, the border might be kept until the frost spoiled it, a perfect mass of brilliant flowers.

This, our chapter on seeds, has extended far beyond its proper limits, yet considering the part which annuals perform in the decoration of a garden, the professional gardener must forgive us for the sake of the inexperienced amateur. With regard to the selling of seeds, if any florist will really take up the subject honestly, save as if he were going to raise novelties, sell it to amateurs at a fair price, and take up those subjects that are most acceptable, we shall be most happy to give up all our advantages to him and thank him into the bargain; for it is our earnest desire to see the amateur able to procure seed that is likely to do him some good: to bring him at least decent flowers. We also want, if possible, to force those of the trade who seem to have lost all moral restraint, to deal honestly by the inexperienced, and to cease plundering the public of their half-guineas for things not worth a shilling. Let amateurs once have a fair chance of raising good things, and it will be one great step towards lessening the profits of fraudulent dealers who trade in false certificates, and improving the business of every honourable nurseryman in the kingdom; but be it known that the certificates of the Horticultural Society are now placed in the hands of a floral committee, formed out of the disgraced and dispersed NATIONALS, who help themselves with impunity, so that the certificates even of the first class are no evidence of merit, but just so much waste paper.

A FEW WORDS ON THE CHRYSANTHEMUM.

WE have had many letters requesting information on the subject of Pompone Chrysanthemums, and we can only repeat the lessons we gave many years ago, and which has been copied into papers and books again and again. As, however, we have no object in spinning out a lengthy article, and so much has been written, we shall merely give a summary of the chief points that require attention, for the culture is very simple. About this month shoots spring up at the base of the plant, and as many

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of these have roots already, some people are tempted to strip them off with their roots for young plants. Now these never make such good strong plants as cuttings, so that when these are two or three inches high, cut them off above the surface. Let them lie in the shade till the wound dries and then pot them singly in three-inch pots and put them in the cold frame, or in the greenhouse, water and shade them for a few days, see that the soil does not get quite dry, and they will soon strike. If you are short of room put them round the sides of four-inch pots two inches apart, and keep them so till they root and begin to grow, when they may be put into three-inch pots, and shorten them to two inches by taking off the tops. As fast as they fill the pots with root, change them to larger ones, and when any side shoots get two inches long, take off the tips of them also, and follow this up all through the year to the end of July. The soil may be two parts loam and one part rotten dung. Plants under this management make fine bushes, and when they are in the pots which they must bloom in, and may not be again shifted, they must be watered with what may indefinitely be called liquid manure, properly designated fertilizing liquid, the safest of which is a half-peck of dung rotted to mould in ten gallons of water, and stirred once or twice a day, for two or three days, and allowed to settle; use this alternately with plain watering. If there be no limit to the size of your pots, continue to shift the plants as soon as their roots reach the sides, and top the branches as they grow, until the end of July or the first week in August. But in May, instead of keeping them in pits or the greenhouse, plunge the pots two thirds deep in the open ground, and thus keep them from blowing over. These plants will require no sticks nor ties, nor need they be shifted after the first week in August, you may then begin with the fertilizing liquid, and continue it for alternate watering, till they are in bloom. It is natural enough that persons who exhibit, should adopt any outrageous mode of getting up plants for show, so long as novelty, however destructive of science, is to cover all sorts of sins; but, grown on the foregoing plan, they are the perfection of plants in flower. The larger kinds may be grown in the same manner, but they will not be so obedient, for the blooming shoots will run up longer, and if you continued to stop them they would not bloom at all; for their last shoot going up to bloom will be longer than those of Pompons. The Chrysanthemum may be grown better in the open ground than by any kind of pot culture, but to do them well you must stop them as regularly as you do those in pots, and be it known that they can be potted up in full bloom without showing the slightest disposition to flag, or any symptom of distress, we have this year removed plants in full bloom, although of three seasons growth in the places where they stood: but not a leaf turned nor a flower bowed his head; and what is more, their branches wanted no sticks, nor had they ever been supported. We recommend this operation to all those who send or wish to send, plants for decoration to Chrysanthemum shows, because any number can be produced without labour or difficulty. But we do not recommend them to be kept in the ground till they are fully bloomed. The time to take them up is when the flower buds show, and before they open; then remove them into good rich soil, and ultimately watering with fertilizing liquid, will give them great trength to perfect their flowers.

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GROWING SPECIMENS.

The skilful gardener will study the character of the plant, the nature of the foliage, the disposition of the flowers, and the most ordinary form in which it naturally grows; and this will determine him whether he shall encourage slow growth or rapid growth; whether he shall allow it to go its own way or be checked; and whether his artificial treatment will so change its ordinary nature as to require at the same time some artificial check. To commence with a very popular, and except for the numerous worthless and weedy varieties recommended by the papers, one of the most elegant plants—the Fuchsia. Let any one of our readers contemplate for a moment the great gawky specimens which have appeared at every show, with long-jointed wood, badly furnished with leaves, and not much better garnished with flowers, and may they not say, with great truth, they have seen much better, much handsomer, though smaller plants, in private gardens of no pretensions, and also at market? In no one instance has it been our good fortune to see good specimens among the successful exhibitors at shows. We do not deny that there have been very large ones which have been grown in a very short time, but there is no merit in this. A cutting of the spring can, with the greatest ease, and without the one-shift system, be grown from six to ten feet high in a few weeks. There is not so much art in doing it as there is in producing a good cauliflower, or a respectable head of celery; but the gardener who attempts to hasten the growth of a Fuchsia does not know his business, or he is void of taste. The Fuchsia should be bushy and pyramidal to be really elegant, and this is impossible with rapid growth. We care nothing about stopping the branches; this may throw out laterals, but the more rapid the growth the more distant the leaves, and no amount of stopping can make it rich in foliage. The Fuchsia should not be grown in too exciting a soil, if beauty of form and richness of foliage be objects to be attained. The plant from a cutting should never be shifted from one pot to another without first reaching the side with its roots; and the shift from one size to another should be merely the sizes the pots run, from sixties to forty-eights, then necessarily to thirty-twos, twenty-fours, sixteens, twelves, eights, and so on, depending entirely upon the size to which it is intended to grow it. Instead of bare wood this will give well-furnished and short-jointed stems and branches; and as the bloom of a Fuchsia depends entirely on the habit of the plant, and cannot come anywhere but at the base of the leaves and ends of branches, it follows that the closer the leaves are the closer the bloom will be, and the more perfect the plant as a subject in flower. The plant that in strong soil and artificial heat will grow the leaves two inches apart, will, without heat and with plenty of air and moderate soil, grow them but an inch apart, and therefore instead of being clumsy and half naked, it comes elegant, and richly clothed both with foliage and flower. We need only call to mind the specimens shown at Chiswick by a public writer on the growth of the Fuchsia, and which were without one single claim except that of having an immense quantity of bare wood, few leaves, and fewer flowers. Others exhibited the same day pretended to have some claim for being the production of cuttings struck the same season, and grown as ugly as they were grown rapid. Such, however, is

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the perverted taste of many, that this was considered a proof of skill by a number of persons—so much the worse, for the garden visitants knew no better. Let us take another plant, which we scarcely ever saw decently grown—the Hovea Celsi, and others of the same habit. Everybody grows it in too rich a soil: everybody grows it too fast, and exhibits bare stems where they should be well furnished, and tall gawky things where they should be moderately dwarf and elegant. We visited a nursery in the eastern part of the metropolis, at which there were unquestionably some of the finest specimens in the world, of particular plants. The Hovea was an exception. Why? Because they were in exciting soil, in which they grow too rapidly, and run away too fast for anything. Checking is of no use in such a case. If the joints are too long, all the topping, all the forcing for lateral shoots, goes for nothing. The lateral, or side-shoots, grow as fast as the others did, make joints as long as the others did; and nobody can remedy the defect except by growing it slower, by abstaining from the exercise of that proof of skill which has been ignorantly proclaimed as the pattern for younger gardeners. Such is the habit of the Hovea that it cannot be grown too slowly; there must, to succeed, be a total absence of all exciting means—no artificial heat, no dung, no exciting manure in dressing; the compost cannot be too simple. Undunged loam, peat, and sand will produce the Hovea better than any other compost; plenty of air, great care in the watering at proper times, shifts from the smallest pots, only one size at a time; they will not bear the least excitement without being the worse for it, but they must be constantly attended, for if they really wanted for water but a few hours they would lose leaves and branches. They are better grown in a cold pit than in a green-house, if they are but safely covered from frost. But no; the patterns of skill show us large plants, which they boast they have produced from a cutting in a few months; whereas the true skill of the gardener would be best exhibited in the smallest healthy specimen they could produce of the greatest age. There is nothing unsightly in a plant of Hovea allowed to grow in its own natural way, without any stopping of the shoots, provided it be grown slowly; but when grown fast all the stopping you can give them will not make them handsome nor prolific of bloom, although it may multiply the laterals and shorten the plant. The Hovea is as delicate in some respects as the most delicate heath, and as soon loses its leaves if allowed to get dry, or to have sudden changes of temperature. This brings us to the Erica, as another tribe that is often sadly misused to show off the skill, as it is called, of a gardener. If the Erica be not excited into quick growth, it will be far more elegant, far more bushy, and be far better furnished than many of those large plants which have assisted to elevate a man above his right position. How many noble specimens do we see unfurnished at bottom? Vestita alba and rosea, grand though they be, with their branches naked half way up? The growers have been in too great a hurry; they have excited the plant; it has received a check, and lost some of its lower leaves—but a few perhaps, but still some; and every time it has been excited and checked it has lost a few more; but heath growing, like all other specimen growing, has been sadly misunderstood by those who were in a hurry for large plants, and still more so by those writers who have exalted the skill, and measured it by feet and

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inches instead of by the taste and judgment displayed. The Heath cannot be grown too evenly; like the Hovea, it is impatient of artificial heat, and those who remember that the fibres of the root are next the side of the pot, should know that it is equally impatient of dryness. With the pots in the sun it is almost impossible to preserve moisture always, and therefore they ought not to be in the sun; and the poorness of the soil in which they ought to be grown renders constant moisture indispensable, not absolute wetness, but moisture—plenty of air, as little in extreme as to temperature as possible, and for this purpose shaded from the mid-day sun. Few plants, however, attain any large size without having suffered many times from some neglect or other, and the more they have been excited the more fatal do these trifling neglects prove. If the plants lose but a few of their oldest leaves every time, we need not wonder at repeated neglects making the lowest end of their branches bare, or the leaves discoloured. There is as much difference in the growth of plants apparently healthy, as in the growth of cattle. Take a plant that looks as well without leaves as with them—the Euphorbia splendens—all thorns and brown stem, a few leaves at the ends of the branches and the growing points perhaps, and no more, but if well grown and not excited, furnished all over with abundance of its rich crimson-scarlet flowers. In one specimen, which shall be not excited too much, the branches shall be numerous, the joints short; in another that has been skilfully (as our theorists call it) grown, that is to say, grown in half the time, the branches shall be far apart, the joints long, even the thorns shall be quite twice the distance from each other, and consequently not half the quantity of flowers. In the trade, who desire to sell the largest plants they can produce, as quick as they can produce them, all this may be very well; they measure things as drapers do, by the yard, and simpletons order them. See in a nursery stock advertised—Azalea indica, twelve to eighteen inches, so much; Boronia serrulata, six to twelve inches, so much; Correa bicolor, twelve inches, so much. Then, out of doors, Daphne Bourbon, twelve inches, so much; ditto two feet, so much; and so on, just as if the value of a plant went by inches and feet, when it is a well known fact that Laurels, Hollies, American plants, and other subjects grown rapidly, are not worth so much a yard high as they are, where they advance moderately, at half the height. Nor do blooming plants furnish so much nor such good bloom. We know this doctrine is unpopular. So was the denouncement of the one-shift system, but it was not less correct. We now denounce as bad gardening, and as the easiest, and therefore popular among the idle, the fashion of growing plants too fast. In the first place, it leaves a man at liberty to apply heat without any rule, soil without any consideration, so that a compost is rich enough; keep the house up to a certain temperature, never mind twenty degrees, rich earth, heat, and moisture will set anything growing three or four times as fast as it would in a proper temperature. It is like feeding an animal enough, never mind its eating too much; as far as size goes we know all will be right, but how about symmetry? We must not particularize, because we would not be personal, but there is occasionally a much better grower of specimens than many others exhibiting at the great shows—specimens that may be seen to have been grown naturally, and tended carefully. Let our readers, and particularly those

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who do not quite believe all we say about rapid growing, look well among the plants at the Show for contrasts such as we have mentioned. Let them particularly examine the Ixoras, some with their leaves far apart, others very differently clothed. Let them particularly observe what a difference in the appearance for the better and worse. In one the red stems may be seen all over, because they are very little covered with leaves, that is to say, there is a great distance from leaf to leaf: then observe others, if there should be any, that do not exhibit the stem at all, but are well furnished. The one that is half bare is what some of the would-be teachers of the present day would call "skilfully" grown, the other has been "properly" grown. There is a wide difference between the value of such plants; one that is a foot high is worth twice as much as the other at two feet. But it is time we left the subject, for it is sickening even to contemplate. It is gardening run mad. The men who figured most in the growing of plants fast, and who, being praised for their skill, soon put forward their notions on such points as were not under the control of practical men, did an infinity of mischief to plants, to gardeners, and to all the garden interests. The injudicious plan of awarding prizes at shows for plants thus spoiled, added to the evils we complain of, and we are only now making our way against the popular and lazy system which had the support of theorists, and led hundreds into false notions of what constituted good gardening. It is not in producing ugly monsters that a man shines: it is not in showing plants in an unnatural form that a man exhibits his skill; and nothing but a judicious appreciation of beauty, instead of size; grace, and elegance, instead of feet and inches, by the judges at shows, will cure it. This cannot be expected while persons are selected who have risen from the ranks of the vulgar, with all their vulgar prejudices about them; men who have only held their places by the encouragement of those who fancy they have achieved something out of the common way when they have produced a plant six feet high, while a good gardener, a man who cultivated upon true, practical, and scientific principles, would only have grown it half the height. This condemnation of rapid growing is not new with us: we condemned when the wiseacres of horticulture thought it was right; we combated the champions of the one-shift system, and of Fuchsia-growing in a hurry, while a public writer was giving every encouragement to the practice, and defending it as a grand discovery in the science of gardening. We have seen our lessons operate among a few sensible men, and we shall now see them more generally followed. As in the case of showing Pelargoniums with a hundred sticks to hold up their miserably drawn stems, we shall see the very defenders of the discreditable offspring of ignorance and vulgar taste turn round and condemn it. We trust those who have respect for the true and proper habit of a plant, a love for symmetry, and grace, and elegance, will not fail to remember that slow growth, so that it be equal, and not occasioned by constant checks, produces short joints, close foliage, and abundant flowers; and that great excitement and rapid growth, though much easier to be accomplished by a lazy gardener, produces the gawky things which it has been the fashion to encourage by prizes and to bespatter with praise in the public journals.

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HOPES FOR THE YOUNG GARDENER.

Sir,—I intend to lay before your readers, not only the hardship, but the almost insurmountable obstructions which are thrown in the way of an industrious and respectable class of young men, who, in the midst of unparalleled difficulties, are steadily and perseveringly fighting their way upwards. And when it is remembered that many of those young men must, in a few years, not only fill the most important and trustworthy stations in noblemen's and gentlemen's establishments, but on them likewise will devolve the task of upholding and maintaining the honour of the order, and the supereminence of British horticulture, it is truly astonishing that so little should be either said or done for such a meritorious class of workmen. Is it because they do not clamourously force their wants upon their employers that they are thus neglected? Is it because they are patient and persevering that they are insulted, and compelled to accept, as a reward for their labour, an insignificant pittance that would not suffice to keep a pet poodle or a favourite parrot? Why not, at least, double their wages, and put them on an equality with the Irish labourer? In our estimation the spade is quite as ancient and honourable as the hod. Is brute strength, mere bone and muscle, to be patronized, while intellect and honest worth is at a discount? A man may carry a hod for twenty years with no more brains than just sufficient to guide him up and down a two-story ladder, but there is not a gardener who holds a situation worth keeping, that can go through one year's duty with interest to his employer, or satisfaction to himself, without intense study and application. Yet there is not an Irish labourer, however brainless or verdant he may be, who does not earn twice as much money as the educated and intelligent young gardener. We have seen the Irish peasant, we have read of the Russian serf, we know the English pauper, we have some idea of the Scotch gaberlunzey, and we fearlessly assert that there is not one of those whom we have mentioned who are not (in many respects), better provided for than the young gardener.

Is it not rediculous that even Gurth, the swineherd, could make more sure of a dinner than the young man who is in training for the chief appointment in a nobleman's establishment? And in stating this much, we are simply stating facts. We have sufficiently tested the system in England, Scotland, and Wales, to know the privations young men have to endure, and the hardships and insolence they must submit to. We speak and write from experience, therefore we can vouch for the truth of our assertions. Ever since we could lug a basket of peas to the kitchen, we have studied the great problem of gardener making. We commenced our career as a gardener in the establishment of a noble duke, and for years we toiled on alone and unsupported; often weary and nearly heart-broken; but still we toiled on, we had an object in view, and we gained it. Let the great object of our young friends be to master their profession. It will be much more to their credit to be looked up to as plain, practical men, than to have the character of superficial coxcombs—mere professional toys. We have seen many bewiskered, lisping gentlemen in

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excellent places, who had nothing in the world to recommend them but their own impudence, and the name of some public establishment where they were almost unknown. We have known others so conscious of their insufficiency, that to keep their place they have bribed their foreman to teach them the A B C of their profession. My young friends, avoid this as you would the plague, never give your men any reason to point the finger of scorn, and to say:—There goes our foreman's apprentice! It is not enough to tell a man to do a thing; it will be necessary at times to show him how it is to be done; therefore, there can be nothing more annoying than to order a man to do that which you cannot do yourself. And always remember, that "servitude is no inheritance;" that gardeners are not confidential servants, in a peculiar sense of the word. Therefore, you may have no better guarantee for your tenure of office than the capricious nod of an employer, who neither knows your worth, nor appreciates your skill.

It is all very well, and exceedingly comfortable for those of our worthy brothers who in winter can snugly ensconce themselves in a warm corner of the steward's room and crack their jokes while they crack their nuts, and with eyes as bright as the bubbles on their "home-brewed," complaisantly contemplate the beauty of a snow storm from a comfortable and well-aired room. We can follow our worthy brother well clothed, and well provided, to his own comfortable garden-home, where he is met by a cheerful and happy wife, who has no fear or care for to-morrow, knowing that, for the present at least, she is in the land of plenty; while our worthy friend, with all the self-satisfaction of a man that knows a thing or two, falls into an easy chair before—

"A blessing ingle, and a clean hearth stain."

But as there are two sides to a picture, it is but just that we should see them both. We shall suppose that our friend has had a comfortable nap in his easy chair; that he has opened his eyes in the best humour with himself, and everybody else; we do not wish to dash the cup of bliss from his lips, but justice demands a question or two. If a married man with two or three children, did he ever leave a good situation (we care not for what cause), and go into a nursery and work for ten or twelve shillings per week? Of course the wages were of no consequence—he would not be long there—he would soon get a place to suit him; indeed, it was only the name of the thing, that was all. But, my friend, were you ever disappointed? Were ever your proudest and dearest hopes blasted? Instead of your remaining in the nursery only two or three weeks, you have either, through the want of interest or some other cause, dragged on through two or three long, miserable, muddy years. Did you ever notice that the comfortable things which you had around you when you first came to the nursery, went in a most mysterious manner? You open your eyes reluctantly to the truth—that your "uncle" has the most valuable part of your wardrobe. Your descent may be slow, but it is, nevertheless, sure. Is not this too true a picture of many a good man's fate?

ONE WHO HAS SUFFERED.

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THE CHRYSANTHEMUM SHOW OF THE ROYAL HORTICULTURAL SOCIETY.

ALTHOUGH the flowers especially concern us, we must report that there was one of the finest exhibitions of fruits that has ever been produced, and a vast number of new exhibitors. We are not quite sure that Her Majesty ought to exhibit against her subjects, and we cannot help fancying that Mr. Ingram, the gardener at Frogmore, where there is no stint of money and means, ought to show his production in a group, "not for competition," but that is a matter of taste. He ought to be able to best everybody, but does not; yet he comes in for a good round sum in second and third prizes, that we think ought to be divided among Her Majesty's lieges. Dismissing however the fruit question with the highest character, we turn to the flowers of the day. There was a splendid display, and some bungling in the judgment, but the most dishonest award was in the class of single specimen plants. The head prize was given to a stool with something bordering on two, or perhaps, three hundred sticks, and instead of being in a single stem there was a complete thicket coming from the ground. Had it been awarded an extra prize out of the class in which it was shown, no one would have begrudged it; but as it was, it was a most nefarious award, of which the judges ought to be ashamed as long as they live. It will be seen from the report which we subjoin that some of the Newington gentlemen are getting into the "sere and yellow leaf" and are well beaten, a Kentish man took the first prize in stands of twenty-four, and an exhibitor from the East-end took second, beating Mr. Forsyth and Mr. Merry. In the amateur class of twenty-four, Lady Buxton's gardener from West Ham, beat Mr. Jones of the Rochester Castle, Mr. Couldry, and Mr. George. In the amateur class of twelve, Mr. Slade beat Mr. James, Mr. Ward and Mr. George. In Anemone flowers Lady Buxton's gardener beat Mr. Butt, and Mr. James, who was third; our old friend Bird exhibited a wonderful collection of fine flowers, and had first Miscellaneous prize, and Mr. Salter had a prize for a collection. Mrs. J. Stoddart had a prize well deserved for twelve artificial Dahlias. The following is a list of all the prizes:—

CLASS 1.—Six plants, distinct varieties (Nurserymen).—1, Mr. Charles Turner; 2, Mr. A. Forsyth, Rectory Road.

2.—Six plants, distinct varieties (Amateurs).—1, Mr. Ward, gard. to W. Fowler, Esq., Tottenham-green; 2, Mr. J. George, J. Nicholson, Esq., Stamford-hill; 3, Mr. James Glover, R. C. Lepage, Esq., Tulse-hill, Brixton.

3.—Three plants (Amateur).—1, Mr. Ward; 2, Mr. E. Harper, J. F. Bennett, Esq., Tulse-hill; 3, Mr. J. George.

4.—Six plants, pompons, distinct varieties, (Nurserymen).—1, Mr. Charles Turner; Mr. A. Forsyth.

5.—Six plants, pompons (Amateurs).—1, D. Hutt, Margaret place, Hackney-fields; 2, Jas. Weston, gard. to D. Martineau, Esq., Clapham Park; 3, Mr. Ward; 4, Mr. Chas. Bolton, 8, Edwin-terrace, London-fields; special prize, J. Glover; special prize, E. Harper.

6.—Six standard plants, large-flowered or pompons (Open).—1, A. Forsyth; 2, Geo. Smith, Tollington Nursery, Hornsey-road; 3, Thos. Parsons, gard. to A. Attenborough, Esq., Acton-green.

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7.—Six new varieties of the current year.—2, A. Forsyth.

8.—Single specimen, large-flowered or pompon (Open).—1. Mr. R. South, gard. to G. D. Tyson, Esq., Upton, Essex; 2, Mr. Ward; 3, Mr. Charles Turner.

9.—Twenty-four cut blooms (Nurserymen).—1, John Cattel, Westerham, Kent; 2, Mr. Wilkinson, Old Ford; 3, Mr. A. Forsyth; 4, Mr. E. Merry, Stamford-hill.

10.—Twenty-four cut blooms (Amateurs).—1, Mr. John Hope, gard. to Lady Buxton, Upton Park, West Ham; 2, R. James, Rochester Castle; 3, Mr. Thos. Couldry, gard. to G. Miller, Esq., the Grange, near Uxbridge; 4, Mr. J. George.

11.—Twelve cut blooms (Amateurs).—1, Mr. Slade, Kingsland; 2, R. James; 3, Mr. Ward; 4, Mr. J. George.

12.—Six cut bloom (Amateurs).—1, Mr. R. James; 2, Mr. Thomas Couldry; 3, Mr. John Hope; 4, Mr. Ward.

13.—Six cut blooms, anemone-flowered, distinct, (Open).—1, Mr. John Hope; 2, Mr. John Butt, Milton-road; 3, Mr. R. James.

14.—Best group of cut blooms (Open).—1, Mr. Charles Turner.

MISCELLANEOUS.—1, Mr. J. H. Bird, Stoke Newington, for collection of Chrysanthemums; 2, Mr. John Salter, Hammersmith, for collection of Chrysanthemums; 3, J. Ivery and Son, Dorking, for collection of Ferns; 4, Mrs. Jas. Stoddart, 31, Cloudesley-terrace, Islington, for 12 Artificial Dahlias.

WHO CAUSED THE IMPROVEMENTS IN THE SHOWS AT CHISWICK?

In the year 1838, having established a society under the highest patronage, for giving a series of Shows and Horticultural Fêtes to teach practical lessons as to the manner in which such competitions should be conducted, we appointed, in January, the days of exhibition for the year. The Egyptian Hall was for in-door, and Cremorne Gardens for out-door Fêtes, and at the last-mentioned, we proposed to show that the objections we made to the conduct of the Horticultural Society could be remedied. We were not a little mortified at the council in Regent-street appointing, for their June show, the day we had been advertising from January the 8th, every week in the only garden newspaper. Nothing daunted, we would not alter our day for them. We had been abusing, as they called it, the Horticultural Society, for shameful parsimony and gross injustice in the distribution of their prizes, for employing incompetent or dishonest judges, for allowing their own gardeners, and the gardeners of one of their patrons, to rob the plants of cuttings, while the exhibitors were excluded; for not attending to the wants of the exhibitors, many of whom were travelling all night; and for not arranging the plants that competed in one place. We had the sole management and control of our exhibition, and how did we remedy all these things? First, in providing with the help of Benjamin Edgington an enormous tent capable of holding 1,600 feet in length of table room; secondly, in showing where each class of competitors were to put up, so that no class was divided; thirdly, by supplying all the exhibitors and assistants with proper refresh-

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ments the instant they had set up their flowers; fourthly, by engaging an efficient police force to take charge of the plants from the moment the exhibitors left them until delivered safely into the charge of the owners at night; fifthly, by employing judges capable of performing their duties honourably, and equitably, with instructions that where subjects were very nearly equal, to give equal prizes, first and second, but of the same amount, and not by shuffling, and paltry objections to withold any. All this we fairly carried out, and that which was intended to crush our hopes and destroy our exhibition, recoiled upon the Chiswick managers, for theirs was an utter failure. We had their best exhibitors, their best company; their tables were miserably deficient, even after ransacking all their own stores to fill them; and of visitors, beyond their own members, there were very few. The band of the Royal Horse Guards Blue, having been engaged for our shows, could not attend theirs on the same day; and for not doing so were excluded from the gardens for years. The worthies fancied they could break through everything. The prizes awarded at our exhibitions (every one paid on the spot, or orders given for the medals) were three gold medals, 15 guineas each; three of 10 guineas; twelve of £7 17s. 6d.; 14 of £1; and 23 large silver medals of 3 guineas, 20 of £1 11s. 6d.; 14 of £1, and 15 of 15s. Exhibitors had their choice of medals or plate, or might receive two-thirds the amount in money. What was the consequence? Why, that having practically demonstrated to all the leading exhibitors that we had not objected to a single evil that might not be remedied, the Horticultural Society were obliged to remedy them. They increased their number of prizes, employed police, gave the exhibitors refreshments, and imitated all our arrangements as well as their managers were capable of carrying them out. There are grateful gardeners and thoughtful nurserymen and amateurs, who do not forget our exertions in driving the Horticultural Society into better and more liberal management. We have not made their awards honest yet, for though we have done extraordinary things in our time, "We cannot make a silk purse out of a sow'sear." We need hardly mention our adventures at Stafford Hall, where the elements themselves nearly froze us the first day, half drowned us the second, and altogether beat us the third.—G. GLENNY.

SOMETHING THAT CONCERNS FLORISTS.

COPY OF A LETTER ADDRESSED TO MR. LOW, SEN., OF CLAPTON, MIDDLESEX, 1855.

SIR,—Is genius so plentiful amongst us that we may prick it out like cabbage plants? Is the master spirit of the age, who has written upon every subject connected with horticulture and floriculture, to go unrewarded; while the puny scribblers, whose fancy never soared above a chicken-coop or a pig-sty, to be rewarded and exalted as men of genius? Is there to be no distinction in favour of honest spirit? Is the author of the "Properties of Flowers and Plants" to be put in the same category with mere plagiarists, or to receive less reward for his valuable and honest labour than they do for

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their contraband stuff? We know, sir, that merit and honest worth do not always meet with an adequate reward—very often with no reward at all in this life—and we humbly confess that we are no lovers of posthumous honours. Sir, it is our opinion—and we think you will at once coincide with us—that two or three hundred pounds in the hands of a useful man while alive, would answer a far better purpose than to erect a monument to him when dead.

We have looked with contempt on the splendid monument erected to the memory of Scotland's gifted "bard," when we know at the same time (to her condemnation be it spoken) she suffered the brightest genius that ever adorned that or any other country to drag out a life of misery and toil, and, at last, to die almost of want. Scotland may glory in the name of "Burns," she may erect monuments to his memory; and, were it possible, employ an archangle to record his fame; but she never can wash from her escutcheon that one dark, damning blot of neglecting Burns when alive. And the gardeners and florists of England will have a more damnable and darker spot to wash out, if they neglect a man who for years has advocated their cause, and devoted his best energies to their interest. Is the "beacon fire" to be quenched? Is the "watch tower" to be pulled down, or suffered to fall into decay through the ignorance, the apathy, or the selfishness of those who have benefitted by the vigilant watchman, or who have been timely warned by the beacon's light?

But you may depend upon it, as there is in Charybdis, so there is in society, an under current constantly at work which very often engulfs and completely destroys our fondest hopes and best-laid schemes. You ought to know by this time, that the English amateur gardeners and florists are the most ungrateful class of men in existence. Let them but attain a certain eminence, and they will kick from them the means by which they rose to that eminence. What but egotism or ignorance could cause a man who had sat for twenty years cross legged upon a table, to jump at a tangent from his perch, and become in the twinkling of an eye a full-fledged florist? Is a knowledge of flowers and plants to be gained by instruction, or innoculation, or what? Or, do the innocents receive it as a baby does the small-pox—in the natural way? We know a lank, lathy milkman, who had nothing in the world to recommend him but bone and muscle, marry a widow old enough to be his mother, but very warm; they changed the milk pail for the watering pot, and at once became "gardeners, florists, seedsmen, and new ground workmen." Do you know anything of phrenology? If so, examine the heads of such men, and find the organs of sympathy and benevolence, if you can. The only organs that are distinguished by any superior development are the organs of secretiveness and self-esteem. Did ever the tear of sympathy or pity grace the cheeks of such men? Talk to them of unrewarded merit; they give a hideous chuckle, as much as to say, why don't you do as I do? Tell them a tale of woe, of want, and of sorrow, and they look mechanically to the fastening of their breeches pockets.

Why, sir, the apathy and carelessness evinced by gardeners and florists for everything valuable in garden literature is a corroborative proof of my assertions. Take an instance: what is the "Properties of Flowers and Plants?" A work abounding in original matter, and arriving at just and

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satisfactory conclusions, so much so that the most intelligent of the trade have acknowledged it as a boon, and adopted it as their standard. Of course, we do not know what the "Properties of Flowers and Plants" have done for the author, but we have some idea of what such a work ought to have done. It ought to have formed a very respectable item on the right side of his ledger. For our own part, we are convinced of the great utility of the author's works on gardening, as well as the great practical knowledge evinced through the whole of his writings. Yet, in reviewing the many useful works which have issued from his prolific pen, we are inclined to give the palm to the "Properties of Flowers and Plants." Not because we think it is more useful to the gardener, but because we know that the subject was beset by almost insurmountable difficulties. Every one had a standard of his own, and too often the round peg was put into the square hole. Conflicting opinions were to be smoothed down; men who contended that a square was as good as a circle were to be argued into reason; a master spirit was wanted to call order out of confusion, harmony out of chaos, and present to the world a standard that might be acceptable to all. This herculean task has been accomplished, and although the author may not feel the great weight of his reward in his breeches pocket, yet there is something cheering to a great mind to know that he had achieved that which few durst attempt, and perhaps no one but himself could bring to a successful termination.

D. OF THE NORTH.

CRYSTAL PALACE CHRYSANTHEMUM SHOW.

THIS exhibition coming so close after that of the Horticultural Society at Kensington could not give us much novelty, nevertheless, some had got their flowers better and some had gone back, so that there was some charge on the successful exhibitors. The following notes, of a daily contemporary, were pretty accurate so far as ordinary observers would estimate the productions, but in reality there was but little to be said for the great majority. Bird's 36 blooms were remarkable for their enormous size and symmetry, but we give our contemporary's version, for after all he fairly represents perhaps the opinions of the ordinary spectators. "Ninon," a delicate white, the production of Mr. William Cook, gardener to Mr. Sandells, of Lower Tulse-hill, and which won a second prize, was greatly admired for the dimensions it had attained, the mass of flower it bore, and its pyramidal growth. Its successful competitor was the golden "Cedo Nulli" of Mr. David Hutt, Half-way House, Hackney-fields, which, not having been operated upon so frequently by the pruning knife, had grown more naturally, and less artificially, and thus entitled itself to the first prize. There were many other sorts of pompones, but the several varieties of "Cedo Nulli" were the undoubted favourites, and those to the improvements of which the most attention seems to have been directed. Of the Chrysanthemums in pots, the "Defiance" and "Vesta," amongst whites, the "Beaute du Nord," red, the "Chevallier Domage," yellow, the "Alma," magenta, and the golden "Christine," were chiefly admired. The cut blooms being all selected flowers, arranged in trusses,

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with due regard to artistic effects, of course made a superb display, and elicited extatic approval from enthusiastic amateurs. Some of the chrysanthemums were of gigantic proportions and of rare loveliness; but the most extraordinary were "Novelty" and the "Queen of England," pure whites, or occasionally a tinge of pink on the petals forming the outer portion of the corolla, and the "Depont de l'Eme," of variegated red and gold, the colours bending and shading off as delicately as if they had been laid on with a camel-hair pencil. Amongst the cut flowers were also some anemone pompones, which, though only few, were very good. Beyond this we need only add the award of prizes:—

Chrysanthemums.

Class I.—Six Plants, distinct varieties, on single stems (Amateurs).—1, Mr. M. Ward, gardener to W. Flower, Esq., Tottenham-green. 2, Mr. J. George, gardener to J. Nicholson, Esq., Stamford Hill.

II.—Six Plants, distinct varieties, on single stems (Nurserymen).—1, Mr. Charles Turner, Royal Nurseries, Slough. 2, Mr. Adam Forsyth.

III.—Single Specimens on single stems (open to all).—1, Mr. Edward Harper, gardener to J. F. Bennett, Esq., Upper Tulse Hill. 2, Mr. Charles Turner.

IV.—Single Specimens on variety of stems (open to all).—1, Mr. J. George.

Pompones.

V.—Six Plants, distinct varieties, single stems, in 3-inch pots (Amateurs).—1, Mr. David Hutt, Half-way House, Hackney-fields. 2, Mr. M. Ward, gardener to W. Fowler, Esq., Tottenham-green.

VI.—Six Plants, distinct varieties, single stems, in 8-inch pots (Nurserymen).—1, Mr. Adam Forsyth. 2, Mr. Charles Turner.

VII.—Single specimens (open to all).—1, Mr. David Hutt, 2, Mr. W. Cook, gardener, to R. B. Sandells, Esq., Lower Tulse Hill.

Pyramid Pompones.

VIII.—Six Plants, distinct varieties, single stems, in 8-inch pots (open to all).—1, Mr. W. Fiveash, gardener to Mr. S. Sillems, Clapham-common. 2, Mr. Edward Harper, gardener to J. F. Bennett, Esq., Upper Tulse Hill.

New Varieties.

IX.—Six New Varieties, in pots, either Chrysanthemums or Pompones, of 1860 and 1861 (open to all).—1, Mr. Charles Turner. 2, Mr. Adam Forsyth.

Cut Blooms.

XI.—24 Cut Blooms, distinct varieties (Amateurs).—1, Mr. R. James, "Rochester Castle." 2, Mr. John Hope, gardener to Lady Buxton, West Ham.

XII.—Twelve Cut Blooms, distinct varieties (Amateurs).—1, Mr. R. James. 2, Mr. W. Tomlin, gardener to J. L. King, Esq., Camois Hall, Newmarket.

XIII.—Twenty-four Cut Blooms, distinct varieties (Nurserymen).—Equal, 1, Mr. John Cattell, Westerham, Kent, and Mr. James Wilkinson, Old Ford, Bow.

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XIV.—Six Cut Blooms, distinct varieties (open to all).—1, Mr. Thomas Potts, 35, Glengall-grove, Old Kent-road. 2, Mr. John Cattell, Westerham, Kent.

ANEMONE POMPONES.

XV.—Twelve Cut Blooms, distinct varieties (open to all).—1, Mr. J. George. 2, Mr. R. James.

XVI.—Six Varieties, Six Blooms of each variety (open to all).—1, Mr. J. H. Bird, Green Lanes, Stoke Newington.

XVII.—Best Device in Cut Blooms (open to all).—1, Mr. John Cranwell, gardener to R. Pulling, Esq., Penge. 2, Mr. Henry Lavey, gardener to E. A. De Grave, Esq., Fetcham, Surrey.

RUSTIC BUILDINGS, ORNAMENTS, AND SCENERY.

As the acceptation of this word, rustic, is of more consequence than any inquiry into its literal meaning, we will merely observe, that it is intended to comprise all works really of a rural character, or in imitation of it; and if we inquire for anything rustic, we mean something in which the style, material, and the mode of putting it together, are rural, or rude —as nearly in their natural state as may be. Thus, rustic seats are made of branches or limbs of trees with the bark on. A rustic cottage would have the bark on all the wood that appeared outside, and a straw, or reed, or furze, or some other vegetable roof; all the uprights would be poles with the bark on; the sides or walls would be straw, or mud, or clay, or some other rude material. A rustic bridge would be of the same character; logs of wood across a stream, with, perhaps, some poles fastened to upright posts, to prevent anyone from falling over. In fact, rustic, means the earliest efforts of man to produce conveniences with only the rudest tools, and without the assistance of those numerous advantages which are now enjoyed. Thus it would appear, that the earliest bridges, the earliest cottages in the rural districts, the earliest seats, would be of the most uncouth description, made with the smallest quantity of labour that could be devoted to produce an effect, and therefore almost all of a piece with the trees themselves. But this has, in the course of time, given rise to a style called rustic, in which all that modern art could do to elaborate upon early notions has been done to diversify the application of the leading features, until rustic cottages have been built like small palaces, and a rustic character has been given to luxuries that rustics never heard of, much less enjoyed. Like all other elaborations, we have seen a rustic style, in some particulars, run down and destroyed by the application of the most modern and anti-rustic accompaniments; such as a rustic door-way and verandah, marble-floored hall, plate-glass windows, and a slated roof, and the whole has been called a rustic cottage. In all attempts to adopt a style of architecture, whether it be for a garden-seat or a cottage, we want consistency, that is, all that is seen at the same time should be in keeping. If we have rustic door-posts and window-frames, we do not want mahogany sashes, and plate-glass windows. However, in England, architects work for money, not for fame, and the

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employer's fancy is the only ruling power in general at work in the construction of everything, from a gardener's roller to a house of parliament. Orders of architecture are put into a kaleidoscope, and whatever mixture seems the most striking and pleasing to the payer, is the mixture adopted by the receiver. Rustic work, as we have before observed, has no business anywhere but in rustic scenery. There should be nothing anti-rustic even in sight. Let there be a rustic garden, but away from the house; let everything about it be rustic: there should be nothing like mechanical nicety; even the path should not be straight. If there be necessarily a partition from some other part of the garden in sight, let it be rustic, formed of rough hewn poles, or posts, driven into the earth, if large, upright, and close together; or if small, to cross each other, but all with their bark on, and not damaged. Let every seat about the garden be a sort of aboriginal specimen of rude mechanism—blocks of wood, or seats made by nailing branches together. The same as regards a table; let it be a contrivance of rude materials, and not a piece of evidently good carpentry. If there be a fountain or a tank in a rustic garden, there should be no marble basin or terra cotta statues; there should not be an attempt at a single feature in which art can be detected; the very margin, if there must be an ornament, should be paved with blocks of wood; the very jet, if there must be an object for it to proceed from, should issue from a water-lily, or some other rural object. If there be a summer-house, or arbour, or temple, it should be rustic—the uprights, trunks of trees; the roof, straw, or furze, or reeds; the sides, thatch, or clay; and the windows, if any, the oldest of all fashions, iron frames, and lead bars, but it is far more in keeping to have no windows. The very flower-beds should be without order, though they may be clear of weeds; and the borders should be more remarkable for their imitation of nature in her wild state. The trees and shrubs should be wilderness fashion; and the only look-out should be where the cow, the rustic shed, dairy, cow-house, and other buildings, should be in keeping. We have seen rustic seats on a lawn in front of a mansion; the milk-maid, cow, and shed, would be quite as much in keeping. "Everything in its place, and a place for everything," is one of the most useful lessons, and it applies to nothing more forcibly than to the ornaments of a garden and grounds. A rustic seat should not be in sight of the mansion; but a whole establishment on a small scale may be got up in rustic style, if there be any object in so doing; the very entrance gate, however, must be rustic; the very fence that is next the road must be so; there can be no half-doing things of this kind. In the cottage itself there must be consistency. In applying to an architect for a design for a rustic cottage, we began to explain what we meant by rustic, and we half offended the gentleman by our earnestness, when he assured us he had built many, some that cost a good deal of money. On explaining that one which had been admired was an instance of great blundering, he was all at once struck, and wanted to know why? We declined going into particulars, but merely said that rustic did not mean Gothic, nor Gothic rustic, and left him to his fancy. He produced a very pretty picture, but as completely Swiss as if that had been his order. Properly speaking, everything rural is rustic; whatever is uncultivated, unimproved, in a state of nature, is rustic; and a country

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clown is called a rustic; a state of nature, or as little removed from it as possible, may be well understood to mean rustic, as applied to a garden. We scarcely know anything prettier, anything more refreshing to the senses, more pleasing to the eye, than a truly rustic scene. That there should be a nook in every establishment in which this is kept up, nobody of taste will question; all we want to impress upon the mind is, the necessity of consistency, and the folly of obtruding a bit of rustic roughness or simplicity within sight of all that is modern and refined. Suppose a lake on a lawn, and by turning one way, we see the Turkey carpet on the drawing-room floor, and on the other, the silvery bosom of the water; the eye, amidst all this, is offended by a rustic bridge. Then, again, if the lawn is carpeted with little beds of roses and all the modern annuals, a rustic seat, or a rustic basket, or some other rustic absurdity, is placed under one's nose, to show how ridiculous it is possible to make a place look by the obtrusion of some incongruity upon the scene. The labours of some gardeners, and the fancies of some employers, seem to be devoted to the impossible object of cramming all the best features of nature into their limited space, and they manage to make every one ridiculous by its diminutive proportions, and the whole surpassingly absurd by presenting all the half-developed follies to the eye at once. Fish-ponds that a dozen of ducks would crowd to inconvenience; canals that a respectable London puddle after a shower of rain would make look diminutive; bridges about the size and style of a boy's rocking-horse turned wrong way upwards; summer-houses that look as if the children had left one of their doll's houses about the place; rock-work, as if the gardener had forgotten to remove the stones he had raked off the beds; and as to rustic work, the best use they can make of that is, to construct baskets, to be filled with stove exotics in the conservatory, with geraniums in the hall, as if to present as great a contrast as possible, by showing the simplicity of our forefathers in their rustic contrivances, with the enterprise and luxuries of the present day. The drawing-room coal-scuttle filled with water and gold-fish would be quite as much in place, and, to thinking people, not a whit more ridiculous. When people, therefore, object to rustic work, the first question to put to them is, where did they see it? because, if a man has seen it out of its place, he may be excused for condemning it, although the same party, seeing it in its proper place, may approve of it as much as he has objected to it before. We do not wonder at the objections; what we really do wonder at is, that people do not, one and all, condemn it, through the miserable cockneyisms committed with it daily. However, the misapplication of anything ought not to be a reason for condemning it; there is nothing more beautiful than rustic scenery, and this can only be made complete with rustic work. Its application may be permitted properly—

First, in any portion of the grounds sufficiently out of the general scenery, and unconnected with the general features, to prevent anything anti-rustic from interrupting the feature; for instance, at a distance from the mansion, and the scenery connected with it, and in some measure isolated; a nook, out of and away from the entrance road, and commanding a rural prospect unconnected with all the dressed part of the ground. In such a place there might be a rustic summer-house, or even only a

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rustic seat; or, if large enough, a complete rustic scene—a cottage, with the appurtenances of a low cow-house, pig, and proper sty; a summer-house, far enough removed to be out of the way of the inmates; a still instead of a gate, to mark any outlet from the place for the cottagers; the place to partake more of the wilderness form than that of a garden. But our business is with the rustic buildings, and seats, stiles, and other contrivances to keep up consistency. The cottage, which should be a lodge for one of the gardeners or husbandmen, should be built in imitation of the rudest style, and, so far as appears outwardly, with the rudest materials. There should be nothing like finished carpentry in sight, However substantial and comfortable it may be made (and the more so, the better), appearances should be kept up connected with the intended scene. The most rough, half-built, and tumbling down looking cottage that can be found in the most neglected village may be taken for a model, if it be but picturesque. The more roughly every out-building is constructed to all appearance, the better; and all things should be to match. The garden, or rather the bit of ground apparently belonging to the cottage, should be without any definite form; it should altogether appear as much like one of the mud cottages built on the side of the forest, on ground stolen a bit at a time, and increased by continual encroachments, as anything. Everything like a fence against pig, cow, or horse, ought to be with whole wood, not chopped or formed, but picked out as near to the form as it could be had. Thus, everything will match, so far as the natural scene, for such it may be called, is concerned. You now want the ornamental part to be completed without doing violence to the rest; a rustic garden, apparently belonging to the cottage, but, in reality, forbidden ground. Here we want the rustic summer-house, rustic contrivances for holding flowers, rustic tables, and sundry other ornamental and useful matters, to appear like rough contrivances, although requiring infinitely more pains than regular carpenter's work. The only allowable licence to depart from the rudest and crudest forms, is that of rendering the objects uniform, where such would add much to the effect; but this uniformity may be just as near as nature will supply you, or perfect, whichever pleases the taste the best. As the matter of mere upright and strong growth may be considered sufficient for some people's idea, there may be uniformity enough without stepping out of the way; but where elbows and bends are required, and *outré* forms are indulged in, it can only be accomplished properly by splitting each one in two, by sawing the piece completely through the middle, which gives us two of the same figure, the one right-handed, the other left; a pole, with one spreading fork, almost like a direction-post, may serve for the right and left of a door-way, if we could not get one the exact match for it to face it, by sawing this completely through the middle; thus we make two half-thicknesses exactly alike, and by putting them opposite each other, or back to back, we make a complete figure. Here, then, the means of carrying out any object whatever with complete uniformity, by splitting those pieces which, from their peculiar form, are adapted for any particular object. For a rustic garden seat there must be a good front, and there is no very great necessity to have two to match; but where we do get hold of a fine piece adapted for a front, we ought to prize it, and make two. We have given abundant

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evidence of the advantage of thus duplicating anything. In the upright supports of a roof, the advantage is great, and by way of forming entrances, some of the accidental growths, when duplicated thus, give instances of what may be fairly called architectural beauty; and be it remembered, that the most uncouth looking log, that seem hardly fit for anything, may, by means of merely finding its double, become a very useful door-post, or house-prop; for its incongruities when duplicated become orderly, uniform, and well balanced. It is almost impossible to find a piece of rough wood that may not be brought in and used. The best mode of constructing a rustic summer-house, is first to find a piece of rough wood so formed as to do for one side as a door-way, a sort of main front support. Split this into two, and each will have a flat side to go up against anything pretty close, and a front with the bark on. Make up your mind as to the size you intend to build, and then get the frame of your place roughly made by a carpenter; a mere shell, as strong as may be necessary, and as rough as you please; by this you get rid of all responsibility as to the strength. This done, place your own rustic materials so that they fasten well to the wood-work already there, and form the striking feature; your own taste must furnish the best looking pieces of wood, and whatever does for one side of a door, will do for another; whatever fills up a nook on one side of the house, will do the same for the other; there will be a perfect uniformity, with only just the natural difference between one side of a branch and the other, a difference that gives a better effect than if they were mechanically accurate; for the outline is sure to be the same, one must fit one side as well as the other fits the other side. There must not be an inch of the wood-work inside to be seen, every bit must be covered; but there is no difficulty in this. The inside may be lined with reeds, or straw, preserving all the character of a make-shift, and securing a warmth equal to any other, and superior to most other linings; the straw should be close and thick, hiding all the frame-work, and showing through the rustic wood-work outside, but making a complete finish. With regard to rustic seats, there may be infinite variety; a common three-legged stool may be made with a slice of a tree for the seat, and the bark left on the edges. This slice should not be too thin. Then a framed sofa may be made, and the seat formed with split wood with the bark on, nailed close side by side across the frame. The front of a garden seat may be a mere pole cut the proper length, and upright stumps for legs; but it is far better to find a limb of a tree, with branches that can be shortened for legs; or if not, to find an appropriate looking piece to make a good-looking front, and frame the other into it. There are many of these to be found, and if one is procured rather curious, or good, split it, and make it into two—one a right-hand, and one a left-hand seat. Examples of this may be often found among garden sofas. The most ordinary capacity will understand precisely what we would direct, by the mere act of duplicating, that is, splitting up, the most ornamental and striking subjects. In all rustic scenery, the entrances to alcoves, to shady nooks, to narrow shady paths, and other similar avenues or openings, should always be formed with such in preference to any other kind of embellishment, and because nothing is so easy as to make both sides match.

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THE ENEMIES OF THE GARDENER.

THE gardener's enemies are not to be numbered; they are like the dust of the roads, or the sands of the sea; his whole work is destroyed in a short time by a hundred different means, if he be not on the alert at the proper time to prevent or avoid the mischief. His cabbages and cauliflowers may be eaten into holes and rendered worthless on the eve of perfection by caterpillars, or they may be destroyed at the onset by club at the root; his peas may be stolen by the mice before they are above ground, or taken by the birds when at maturity; his roses may be blighted by the green-fly; his onions spoiled by the maggots; a tree of ripe cherries may be cleared in a morning by a few rooks or blackbirds; his grapes, peaches, and nectarines disfigured by wasps; his plants in the houses may be cut up by the bug, the scale, the thrip, the green-fly, and the spider. Turn which way he will, there are thousands of his foes ready to commence their ravages the instant he neglects for a day or two any single department of his business, and he has no small difficulty in pursuing his ordinary duties at times when some one or more of these pests threaten destruction to his choice productions, and he is obliged to turn aside to use those remedies which experience has taught him will soonest rid him of their presence. Nor is it sufficient to use any temporary means; his life, all the summer season, is a life of watchfulness; there is no duty so constant, no attention so unremitting as the gardener's, and if he neglect but an hour, he feels the effects for an age. If his weeds be neglected a while, they drop their seeds, and he has work cut out for the next year; and among his numerous enemies in this respect he may reckon a careless neighbour, or a road-side ditch his worst, for they will sow seeds all over his ground in spite of his care. But our present object is to consider the best means of getting rid of those pests of animated nature, which spoil, and often altogether devour and destroy, his crops—earwigs, wood-lice, ants, snails, slugs, wireworm, grubs, living creatures without end, any of which, left alone for a time, prove endless plagues. Among the most useful implements to aid him in his crusade, we reckon the syringe, the frequent use of which is of immense benefit, for it is one of the greatest disturbers of insects, whether on fruit trees out-of-doors, or potted plants under glass. The timely use of the syringe washes them off, and by perseverance will go a long way towards preventing the incalculable mischief that is done by the green-fly that infests all tender shoots of fast-growing plants. How commonly do we see a rose-tree clean and free from any living pest, and the next day actually covered with aphides! and if they are allowed to remain, how soon do they suck the juices from the tender stems, and kill the buds that are on them! We know of no remedy for these prolific gentry in-doors but fumigating.* Out-of-doors, tobacco-water, or Gishurst Compound dissolved in water, will kill them; in-doors, fumigation will cut short their career. Some adept a paper or calico covering for any favourite tree or bush, and fumi-

* Fumigation is now rendered a very simple process by the use of Neal's Pastils, which have only to be lighted and shut up with the plants.

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gate them underneath it; for if we can but fill the cap or covering with the smoke, which always rises, and keep it full for a few minutes, the flies will all die, and may be immediately washed off with the syringe. In houses, or frames, or pits, there is no difficulty. We need not say the house should be closed up, so that none of the fumes can escape, and it is as well to do it in the evening, that it may be closed all night. You will see the dead flies by wholesale, lying on the pots, or hanging about the leaves, but not a living one among the whole number, however much they abounded before fumigation. For the red spider, a damp moist heat and syringing will do something; but it is a good plan to strew sulphur on the flues or hot-water pipes; the sulphurous vapour that arises settles the account with this pest very quickly. But plants must be watched for this, because if the leaf actually shows the attack by the colour, they have already sustained considerable damage; and by looking often at the under-side of those leaves which are susceptible of attack, a straggling spider or two may be seen, that would become the founder of a colony not so easily routed. Frequently washing the walls of stoves with lime-water, in which a little flour of brimstone has been mixed, is an excellent thing to prevent the red spider, and if a plant has it very bad, it must be discarded from the house, or all the rest will become infected. The mealy bug is one of the foulest-looking insects that ever got hold of a plant, and so difficult is it to get rid of, that houses once troubled with it can hardly be cleared by any known means. To clear a plant of it, a good tubful of tobacco-water, or dissolved Gishurst Compound, should be prepared, strong enough to enable you to taste it, in fact, about the strength of tea. By putting two bars across the top of the tub, and inverting the pot, with its edges resting on the bars, the entire plant will be immersed in the water, and in twenty minutes or half-an-hour the whole will be killed; but if the plant be too large for this, it must be washed with a long hand-brush like a shaving-brush, and this must be performed very carefully, or the young shoots will be damaged. Many stove plants are subject to this, and a foul plant put among fifty clean ones, and neglected, will give it to them all. Whether in a very young state they blow about like so much down, and locate wherever they alight, or not, we can hardly tell; but they propagate very fast somehow, and if a foul plant be at one end, some of the cleanest at the other end will soon have them. In fact, this and the red spider are formidable plagues in the stoves and forcing-houses, and if neglected, the plants suffer rapidly. The bug will locate on the most tender shoots and bloom-buds, and so get among the tender flower-stems, that Ixoras, Clerodendrons, and other plants blooming in bunches, will not be able to flower at all, unless the bugs be eradicated before they have time to do mischief. Another mode of getting rid of these creatures, is to wash all the infested parts with yellow soap-suds, and a new shaving-brush has always appeared to us to be the best adapted for the purpose; the bristles are just stiff enough to drive them out, and they cannot stand soap if they are disturbed; but even syringing will scarcely remove them when they have once taken full possession of all the corners and interstices of a plant. Care must be taken that the suds are not too strong, nor too hot, but they are the more effectual for being a little warm. We need hardly

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say, that the plants must be handled very carefully, for it is easy to bruise and damage the young shoots and blooming-buds with rough handling, and in this respect it is impossible to be too tender. The hand must support the leaves and young shoots, which should lie in it, or lean against it, while the other hand plies the brush. By this means the stalks of the leaves are not bent or broken. Some lukewarm water should be handy at the time to clean away the soap, or, which is better, to syringe the plant with after it is cleared of the bug. The scale infests hard-wooded plants generally, more than anything succulent in its nature; and this scale has to be removed with some gentler violence, for it adheres generally pretty close, and all the syringing the plant could have would not stir it. A stiff brush and warm soap-suds may; but it will frequently be found necessary to scrape it off. Some gardeners, as a preventive to this, mix up a wash of clay, thick enough to dry on a thin coating, and it has been found that the scale cannot settle or breed on this; but it has its disadvantages. In the first place, it does not help the appearance of the plant; in the next, it is questionable whether the ordinary organs of the plant can work so freely when there is a close coating of any kind over the surface. But when a plant has had the scale badly, it may not be amiss to give it a wash of this sort, to remain on a few days, while there is a chance of any of the young brood hanging about, and then to syringe it off by degrees, for it will be some time before it is all washed off. Ants are very awkward things in a house, for they will, if in any quantity, often make their colony in a pot, which they work into a thousand hollow ways all among the roots, and the plant is almost destroyed before the mischief is discovered. Generally, the best way of thinning these intruders, is to coax them into one spot, and pour boiling water on them, or to wet their places of rendezvous with strong lime-water; or lay a few hollow bones about, if they frequent parts where this hot-water and lime-water cannot be used, and, having a pail of boiling water handy, throw these bones into it quickly, and thus destroy hundreds at a time. These may be dried again, and placed as before, or in any place where they most abound. Where these industrious little creatures can fairly locate themselves, it requires a good deal of perseverance to dislodge them. Of course, by pursuing any of these methods earnestly, their numbers lessen very much, and when you find but few, stir the tan, or soil, or whatever they harbour in, to disturb them still more, and by this means you will finally dislodge them all, or render them so scarce as to be of no importance. The wood-louse is another ugly tenant of a house, and those among the tan can only be trapped and destroyed. One of the most effective traps is half a large potato scooped out and dried, with a notch cut in the edge. This laid hollow downwards will sometimes trap twenty or thirty at a time; and of course, by increasing the number, and laying them about, a large number is taken every day. The pail of scalding water to shake them into, is the readiest way of destroying them; but you must not wet the potato. Turnips are much about the same; but neither will entice them till the juicy surface is dried. Toads kept in the house will pretty well keep them under where they can reach; but a toad is not comfortable in warm tan, and it will contrive to get up into one of the pots, and bury itself in the soil, so that they are only

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useful on the floor, where they also make free with any small vermin which invade their territory. Slugs and snails are the most destructive things that can harbour in a house; they are occasionally brought in among the pots that have stood out of doors, for they get into the draining-holes, and make a habitation, whence they sally forth at dusk, after the houses are closed, and commence their meals upon the first, and sometimes the best plants that can be got hold of. Many an hour have we lost in endeavouring to find them, often in vain, although we have traced them a long way by the slimy tracks they left behind, and resorted to night work before we could detect them. On this account, every pot that is brought into the greenhouse or stove for the winter, should be closely examined, and if there be the least sign of any one having been about, and it cannot be seen, the ball should be turned out into the hand for examination, rather than risk the introduction of so dangerous a visitor. If, notwithstanding all our care, we see a slug trace of a snail or slug on the ground, the walls, brick stages, or shelves, we ought not to rest until we have found the offender, for in a single night it may cut off the best shoot of a valuable plant. Potshreds may be placed about, here and there, with the hollow part towards the ground, for the chance of their harbouring them; and if there be any danger of a colony among the pipes, or under the stages, or flues, it is a good plan to sprinkle fresh lime rather thickly about, for if it touches them, they will be destroyed, and it will prevent them from coming abroad, even if they are not killed by the first application. A fumigation of houses once a month, without waiting for any excessive attack from aphis, is not money thrown away. The smoke is a great enemy to all animal, or rather insect, life; and it has the effect of ridding us, too, of many flies, moths, maggots, and other living things that do us no good, and often do harm. Butterflies and moths, in summer time, often take the liberty of laying their eggs on a plant, and if the family be not disturbed by some of the washings instituted for other purposes, yield us a goodly race of grubs, which we may not detect until they have done a good deal of mischief. This could often be prevented by periodical fumigations; and although this is not done without expense, it is worth all it costs to be assured of an empty house, and therefore no bad tenants, or at least the extermination of all that cannot live in tobacco smoke, though the mealy bug and red spider are not to be dislodged without other means.

All we have said of houses applies with equal force to hot-beds, pits, frames, and other receptacles for plants; there is no difference in the remedies. All the means of extermination practised in the stove and greenhouse will be equally efficacious in other horticultural buildings; but in conservatories we cannot apply them; all we can do there is to keep the shelves, walls, windows, and all sorts of corners and ledges, well cleaned, and to remove infected plants to the other houses for fumigation, for smoke will not agree with the company who frequent the conservatory, even if it does not communicate with the house.

With respect to the gardener's enemies out of doors, and their name is legion, we have very different customers to deal with, and much greater difficulties to contend with. So far as ants and wood-lice are concerned, the same means in all respects must be resorted to; but instead of a stray

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snail or slug, we have them in large quantities. There is no such thing as tracing a solitary marauder by its shining train; if they plague us at all, they do it wholesale; and if we do not protect our young peas and salads by some means, they are occasionally lost altogether. A liberal use of lime is of great service, as a preventive of mischief to the place actually guarded; but we ought to aim at once at their destruction. The best traps for slugs and snails are tiles, with the hollow part downwards, and cabbage leaves; examine these every morning, and the under-sides will give us plenty to kill. These should be laid down again directly, and the next morning be examined again. In a garden neglected two years, where weeds had been left to grow, and all living creatures held undisturbed possession through the whole season's growth, we once had to contend with two ripe harvests of weed-seeds, and all the slugs and snails that had congregated, and multiplied during the whole time. We burned all the weeds, and buried all the surface-soil, roots, snails, slugs, bots, earwigs, and other living pests, two feet deep, and fancied we had at least got rid of all but a few stragglers; but no sooner did a green leaf appear, than it was fairly riddled or gone. We resorted to cabbage leaves, which we procured in the neighbourhood, and laid them thickly about the ground. The first morning the under-sides were covered with hundreds of slugs, scarcely thicker than a small straw, besides a few goodly parents; day after day, the numbers seemed scarcely lessened, and when the leaves became too much withered for use, we procured fresh ones. It would be incredible to speak of the numbers destroyed on half-an-acre of ground, between four brick walls; and although the cabbage leaves were evidently the tempting food, and we had destroyed tens of thousands by our daily crusade, not a crop could we raise without an embankment of lime, and constantly picking off those that seemed to be coming up through the ground between the two rows of lime, for cross them they could not, this was a certainty. Perseverance, however, at length reduced the numbers so much, that we seemed to have no more than the usual share, and our cabbage-leaf warfare ceased, for we took up hundreds at last without finding an enemy. We cannot help thinking, that these creatures had the power of working their way through a good deal of earth, and that our burying system was of little use. We have since seen tiles used with good effect, but must prefer cabbage leaves, for they are more attractive, although more troublesome, and they must save the crops, because they are greatly eaten from the first to the last, while the tiles simply tempt those that are near as a shelter.

If a ditch and hedge form a boundary to a garden, it is one of the worst we can have, for they form an harbour for snails and slugs that it is almost impossible to counteract; the only effectual stop to their intrusion is a sunk or raised trough the whole length, kept full of water, a ridge of lime is only effective for a short period; it soon loses its caustic quality, and this once gone a snail could crawl on it as well as over a ridge of common earth, but they cannot get through water. The kind of slugs that inhabits the banks of ditches is enormous as may have been seen of a cloudy morning when those black monsters intercept our path; one of these could gnaw through a cabbage in a night, or lay a whole

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row of peas or lettuces under contribution, costly, therefore, as it might be to make a gutter full of water, by means of a wooden or zinc trough, it would be the only way to prevent their depredations, for vain would be the task of trapping them, though, perhaps, a row of cabbage leaves might tempt them to stop short of any other crop.

Old walls are too often harbours for slugs at the lower part, and snails higher up. Often too does the other side harbour them, and they have merely to come down to their feast. This is perplexing, for there is hardly any means of preventing them; a trough full of water at top would have the effect, but if it were not bedded in mortar, and closed on both sides, it would form an additional protection for them, and they would locate underneath it, in a space that would be altogether incredible, lime here would only prevent them while it retained its caustic quality, and we have been a most unwilling victim to the colonies of these creatures, inhabiting a hundred yards of over-growing, which sheltered them by day, and our peaches and nectarines served them for a feast at night. At length we nailed a horsehair rope just under the top of the wall on our own side, and it was an effectual bar to their depredations. This, however, would not stop them on the ground, as slugs would burrow under it, and defy it altogether. It will be seen from this, that unless you can stop their importation from your neighbours' garden, your work will be endless and almost fruitless. Your whole mind, therefore, must be set to stop their egress from parts where you have no control, and then exterminate those already on the premises, by the means we have mentioned. Earwigs have baffled the exertions of many gardeners, but it has been chiefly because they were careless until the insects began to be numerous; as a proof of this, we have known Dahlia growers to plant out in May, to begin hunting for earwigs as soon as the blooms were attacked in July and August. Now nothing could be more thoughtless than this, although some of the pretended teachers of the cultivation of that flower actually tell us that as they advance towards flowering we must begin to stop the earwigs. It is a thousand to one if they can be got rid of at all, if neglected till that season. Earwigs should be always trapped and killed. For this purpose, hollow bean-stalks properly dried, and cut into six or eight-lengths, should be placed thickly about the borders, close to or in any plants that may be there; these should be thrown into a pail or pan full of strong salt and water every day, as long as one is to be found in the entire round of the garden. When the Dahlias are planted out, or any other plant that they attack, one of these traps should be placed to each; and as the insect prefers a snug place above ground to burrowing under ground, and especially in wet weather, they will be almost extinguished and exterminated during the spring months. The old gardeners used to put lobster claws on the top of small sticks, and the younger ones put small flower pots, with some moss at the bottom, all these things are good if examined daily, and all that are caught are killed; but if they are merely put there, and not examined, they form the very harbouring material which enables the insect to multiply. Better leave even Dahlias to their fate, than put pots of moss on their sticks, and not daily examine them, and kill all that are caught. We have even in the Dahlia ground put the pot we have taken them out of, on the top of the short stick from

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the pots close to the plant; and, although we have not caught one in a half-a-dozen pots, we always felt that we were destroying a brood, and long before blooming time came, we have not seen such a thing in the whole round of pots, but this is not the time to leave off examining, because earwigs fly; and as a proof of this, we have seen them actually stuck upon newly tarred palings and fences with their beautifully delicate wings fast to the tar, and they unable to replace them; so that we must not relax a single day, if we desire to keep clear of them. A swarm of these on their travels might be tempted to alight where there was anything very attractive, and if we allowed them a few day's uninterrupted liberty, we might find them increased by numerous families.

RAISING THE GERANIUM FROM SEED.

The proper choice of seeding plants must be made according to what you want; half a dozen of the best varieties may be planted out in the open air in May, when the weather is settled, and where no others are near; or they may be inoculated with any sorts you wish to work from for improvements. For instance, you take well-shaped, thick-petalled flowers to seed from; take out all the anthers as soon as you can get hold of them, and when the pistil becomes glutinous take the anthers from some flower with a good quality that you wish to obtain on thick-petalled flowers, and put the dust on the pistil of those you are to seed from. The most easy method of conveying the powder from the anthers of a flower is on a camel-hair pencil; but it is the same thing in effect if you take the flower and touch the pistil of the seedling plant with the anthers, for enough powder is sure to leave the anthers and attach itself to the pistil to answer all the purposes of fertilization. The plants to be seeded will need little or no care, unless they have to be covered in very stormy weather. The truss may be gathered when the seed is nearly ripe; and, by hanging it up or laying it down in the sun, will ripen, and the seed must be looked after if any of it escapes; to prevent this, however, as it dries, it is well to put it in shallow boxes or drawers to dry. This seed may be sown in the spring, in wide-mouthed pots of soil such as we have recommended for general culture. The seeds should be sown thinly, so as not to crowd each other, because you are quite as likely to waste a good one as a bad one in the event of losing any; place it in the green-house, or, if you like to hasten it, you may raise it on a hot-bed; but where the geraniums are preparing for bloom, and the temperature is moderate, will do very well. Place a flat glass over the seeds till they vegetate, when they may have air, which you can give by uncovering them. As soon as they are up and large enough to take hold of, prick them out an inch apart in other large pots, for a great body of earth is far less liable to changes than a small one, and therefore there is less danger of their suffering from dryness. Here they may keep growing until they begin to be crowded, when they may be put singly into sixty-sized pots, well drained and filled with the compost recommended for the ordinary culture. When

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these pots are filled with roots, change them to forty-eight sized pots, and from them, as soon as necessary, to size thirty-two, in which they may bloom; when you give away, or throw away, all that are not better than you possess already; and if you cannot do this very readily, cut off all the blooms to prevent their spoiling any seed that may be disposed to set on the best of the flowers in the collection. For all the good they are, they may be turned into the open air, or into frames; or, if you have a house devoted to seedlings, and there are but few good out of a large number, the good ones may be removed to another house, and those which are of no other use may be left in the place they occupy, to use for cut flowers, as people are not hypercritical as to the forms of a Geranium in a bouquet. When a seedling is found very good, so that there is no doubt about eventually naming and propagating it, the sooner all the spare pieces can be taken off and struck the better, because cuttings struck early become plants in time to propagate from again; and from a single cutting taken in April or May, many others can be obtained before the autumn; while the original plant, denuded of some of its branches, pushes into fresh growth, and affords the means of rapidly increasing the variety.

MISCELLANEOUS.

Chrysanthemum Shows.—The last of the Chrysanthemum Shows was the most extraordinary exhibition of the season. The Pompons beat everything that has yet been exhibited. The Crystal Palace had its attraction, so had Kensington, but the Tower Hamlets display, at the grounds and pavilion of the Eagle Tavern, Mile End, was remarkable for a show of skill never before equalled; the best collection of Pompons were circular, finely rounded at top, close, compact, and of good colour, with the most splendid bloom, and nearly six feet across. The single specimens and cut blooms were also very fine, and, which is of great importance, the place was crowded all the day and evening.

Tarring Iron Work.—This plan, which is extensively followed at Trentham, the residence of the Duke of Sutherland, is found to answer much better than painting. Out-door iron work, such as rails and fencing, is referred to. The material used is, one-third of Stockholm tar mixed with two-thirds of gas tar. This is laid on boiling hot, and in dry warm weather, when the iron is quite dry. It is laid on with a brush, and spread as thinly as possible. The fire should be kept close to the work, in order that it may be used boiling hot, as it can then be spread much thinner; under which circumstances it dries quicker, and presents a harder and smoother surface. The cost of applying this to common iron ox-hurdles is found to be three-eighths of a penny per square yard; and it is computed to last nine years.

END OF VOLUME XV.

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